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615 Tasman Drive
Sunnyvale, CA 94089**

May 2, 2002

Via Electronic Filing

Equipment Authorization Branch
Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD 21046

RE: (1.) FCC ID: KL7-612T-V1 and KL7-612T-V2
(2.) K. Hawkins e-mail to American TCB of 4/11/02
(3.) K. Hawkins e-mail to American TCB of 5/1/02

Ladies and Gentlemen:

I am writing to provide the information requested in Reference (3.) above. You asked us to explain the pulse waveforms submitted in the up-load of 4/14/02 in response to Reference (2.) above. (These waveforms are enclosed in a separate PDF file for convenience.)

There are three waveforms in that up-load showing that four transmission pulses of 9.75 msec duration are transmitted in a 310 msec interval, and that the Tag is silent for 10.1 seconds between re-transmissions.

The diagram submitted April 14, 2002, shows at the top of the page the timing measurement of the four pulses in the second (rightmost) portion of the diagram. There is a measurement anomaly in the leftmost portion of the top diagram in that the four pulses are not visible as fine structure. Consequently, we have had the timing verified again and are including the latest such data with this response as Page 3 below. In this latest attached waveform diagram, four pulses are shown with the silent period markers set at 10.079 seconds.

In the submission of April 14, the second (i.e. middle) diagram shows the individual four pulses with the markers set at 310 milliseconds. Finally the third (i.e. bottom) diagram shows a single individual pulse with the markers set 9.75 milliseconds apart.

The content of the pulses may be explained by referring to Page 7 of the Theory of Operation, (provided herein as Addendum 1 for convenience) which shows the bit structure of the Recognition Code transmitted by the Tag to the Reader. To summarize, there are 176 FSK bits in each pulse with a bit period of approximately 55 microseconds. The content of these bits consists of the Unique Recognition Code, which is made up of the preamble, tag field, signpost field, and alarm control codes field of the Tag.

You also asked us to clarify the operation of the Tag to ensure that the 10 second silent period is maintained. The Savi Tag is equipped with a timing capability that controls the re-transmission process of a given tag and prevents re-transmission until 10 seconds of silence has been measured.

The Signpost continuously transmits its 132 kHz signal. If a second tag is introduced into the vicinity of the 132 kHz signal, it operates independently of the first tag. The first tag will not be stimulated by the presence of the second tag. Nor will the 132 kHz Signpost signal reset the timer of any tag so as to interrupt the timer or otherwise violate the 10 second silent period.

Finally, please note that the data discussed above reflect only the timing. The maximum RF fields produced by the tags have been reported previously in the original test report.

We hope that this information meets with your approval. If there are further questions, please do not hesitate to contact me or our counsel, David Hilliard of Wiley Rein & Fielding LLP (202-719-7058 or dhilliard@wrf.com).

Respectfully,

Rod Thorne
VP, Network Products
Executive for Compliance
Savi Technology, Inc.

Encl: Timing Verification waveforms, 1 page previously submitted on 4/14/02.

Addendum 1:
Page 7 of the
Theory of Operation

Tag to Reader Uplink

Under controlled circumstances the tag transmits its unique Recognition Code to the Reader. This unique Recognition Code is used by the system to control access and exit to secure areas, to perform system component identification and to report alarm status.

Recognition Code Structure

The tag transmission consists of a unique Recognition Code made up of a preamble and three fields (refer to diagram below). The three fields are, (1) the Tag field, which is permanently preprogrammed into the tag, (2) the Signpost field, which is received from the Signpost transmitter and (3) the Alarm Control code field. These three fields are required by the Site Control Unit to uniquely identify and control routing of an item within a facility and notify the system of alarm conditions.

Preamble 20 bits	Tag field 128 bits	Signpost field 16 bits	Alarm Control Code field 12 bits
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Unique Recognition Code

Tag Modulation and Coding

The Tag to Reader communication link uses FSK modulation at 433.92 MHz with frequency deviation of +/-35 KHz.