

Thompson Glenn-EGT005

From: Tod Hufferd-ETH003 [Tod_Hufferd-ETH003@email.mot.com]
Sent: Monday, January 04, 1999 3:31 PM
To: Glenn Thompson-EGT005
Cc: Tod Hufferd-ETH003; Ed Clements-FEC004; Michael Piper-WLMP00
Subject: LS950V

The LS950V supports one transmission per frame. This consists of a single packet transmission that have varying transmission durations depending on inbound speed. The following are the transmission durations for each of the supported inbound speeds:

Inbound Data Rate	Transmission Duration
800 bps	160.0000 msec
1600 bps	80.0000 msec
6400 bps	24.0625 msec
9600 bps	16.0417 msec

The LS950V supports two kinds of inbound transmissions. The scheduled transmission that is controlled by an address/vector combination and the ALOHA transmission that is generated by the subscriber device. To determine the inbound transmission duty cycle both the scheduled and ALOHA transmission will be considered separately.

Scheduled Transmissions:

The LS950V supports one transaction at a time. A transaction is defined as an address/vector/response combination. The LS950V can receive one address/vector pair in a single frame that can direct the unit to respond in the following frame. Therefore, for a schedule transmission, the LS950V can transmit every other frame. This yields the following transmit duty cycle for a given speed.

Inbound Data Rate	Transmission Duty Cycle
800 bps	$.160/3.5 = 4.57\%$
1600 bps	$.080/3.5 = 2.29\%$
6400 bps	$.024/3.5 = .69\%$
9600 bps	$.016/3.5 = .46\%$

ALOHA Transmissions:

The LS950V supports one active ALOHA transmission at a time. Once an ALOHA transmission has been sent by a subscriber unit, the subscriber unit must wait the ALOHA timeout before sending the ALOHA transmission again. The ALOHA timeout is configurable by the paging infrastructure. The minimum value allowed by the ReFLEX25 protocol for the ALOHA timeout parameter is 1 frame. Therefore, the subscriber device could send an ALOHA transmission in one

frame, wait one frame
for the response, and retry the ALOHA transmission in the following frame if
no response was sent
by the infrastructure. The shortest time between ALOHA transmissions would
be every other frame.
See the table above for the corresponding transmit duty cycle.