

**Behnam Ghaffari**

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**Subject:** FW: FCC File No. 0207-EX-PL-2008

Benham,

We are doing a demo of what is called a "regenerative DVB-RCS payload". Basically DVB-RCS (DVB Return Channel Satellite) is an industry standards based bidirectional communications system that uses a basic "hub-and-spoke" topology for communications. In essence, this means that for each piece of data that is to be transmitted from a SIT (Satellite Interactive Terminal (modem)) to another SIT forcing a "double-hop" transmission.

ie. From SIT1 to send to SIT2:

- 1) from SIT1 the rf is sent up to a satellite, reflected back to the "hub"(where it is processed)
- 2) sent back from the hub back up the satellite and to the final destination SIT2).

The regenerative nature of the Amazonas service avoids this double hop by basically putting a full DVB-RCS hub onto the satellite itself. This means that a transmission from SIT1 to SIT2 requires only the single hop (SIT1 to satellite which processes and "regenerates" to SIT2).

The key here is that the actual hub is located on the actual satellite itself and this is the core of what the demo is to show.

Let me know if you would like any diagrams for better explanation?

Thanks in advance,  
Paul

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