Dear Sir,

I am writing you to inform you that the ITU-R is going to make reference to some IETF RFCs in two ITU-R Recommendations.

ITU-R specializes in facilitating international collaboration to ensure the rational, equitable, efficient and economical use of the radio-frequency and spectrum and satellite orbits. Study Group 4 of the ITU-R undertakes studies on systems and networks for the fixed-satellite service to create relevant standards and to draft relevant parts of the ITU Radio Regulations.

One of the study topics of Study Group 4 is IP over satellite. This topic has a close relation with relevant IETF studies. A draft new Recommendation named “Performance enhancements of transmission control protocol (TCP) over satellite networks” is to be created. In this Recommendation, we intend to include a reference to some IETF standards, so called RFCs (Request For Comments). The way we reference to the ETF RFC in the Recommendation is to make an abstract column in a Table of TCP enhancements. In the abstract part we intend to make use fully or partly the abstract of IETF RFC text. I would like to show a few examples here:

RFC 2018
TCP may experience poor performance when multiple packets are lost from one window of data. With the limited information available from cumulative acknowledgments, a TCP sender can only learn about a single lost packet per round trip time. An aggressive sender could choose to retransmit packets early, but such retransmitted segments may have already been successfully received. A Selective Acknowledgment (SACK) mechanism, combined with a selective repeat retransmission policy, can help to overcome these limitations. The receiving TCP sends back a SACK to the sender informing the sender of data that has been received. The sender can then retransmit only the missing data segments. (Fully)

RFC 2488
TCP provides reliable delivery of data across any network path, including network paths containing satellite channels. While TCP works over satellite channels, FEC indirectly allows...
TCP to more effectively the available channel capacity by correcting link errors prior to TCP layer. (Partly)

RFC 2760
Rate-based pacing (RBP) is a technique, used in the absence of incoming ACK, where the data sender temporarily paces TCP segments at a given rate to restart the ACK clock. Upon receipt of the first ACK, pacing is discontinued and normal TCP ACK clocking resumes. The pacing rate may either be known from recent traffic estimates (when restarting an idle connection or from recent prior connections), or may be known through external means (perhaps in a point-to-point or point-to-multipoint satellite network where available bandwidth can be assumed to be large). In addition, pacing data during the first RTT of a transfer may allow TCP to make effective use of high bandwidth-delay links even for short transfers. However, in order to pace segments during the first RTT a TCP will have to be using a non-standard initial congestion window and a new mechanism to pace outgoing segments rather than send them back-to-back. Pacing can also be used to reduce bursts in general. (Jointly with ITU-R text)

Similar references are also to be made to IETF RFC 1122, 1191, 1323, 1644, 2414, 2481, 2507, 2581, 2582, 2883.

Meanwhile, ITU-R Study Group 4 is working on preliminary draft new Recommendation on Quality of Service (QoS) architectures and performance for satellite IP networks. In which references to a few IETF RFCs to provide QoS in the Internet are to be included.

We believe that close collaboration between ITU-R and IETF must be fruitful.

Yours faithfully,

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cc. Mr. Scott O. Bradner, IETF