TCP Friendly Rate Control (TFRC): Protocol Specification RFC3448bis

draft-ietf-dccp-rfc3448bis-05.txt

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Testing and simulations from A. Sathiaseelan

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Changes from draft-ietf-dccp-rfc3448bis-03:

- Added text that the choice of b=1 is consistent with RFC3465bis. Feedback from Gorry.

- Typos and such reported by Arjuna.

- Updated terminology section, fixed typos and such. Feedback from Vladimir Moltchanov.

- Added a section to the Appendix about how one would add CWV-style behavior to TFRC for data-limited periods, if one wanted to. Feedback from Gorry.

- Added an implementation section about X_recv_set.

Changes from draft-ietf-dccp-rfc3448bis-04:

- Added a mechanism for decaying the value in X_recv_set following a loss event in a data-limited interval, and restricting recv_limit to "max (X_recv_set)" for the next RTT. Also added a discussion to Appendix C of the response to a loss during a data-limited period. Following feedback from Gorry and Arjuna.
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Changes from draft-ietf-dccp-rfc3448bis-04:

-    Protocol   Response to a loss during a data-limited period

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- Standard TCP: Set ssthresh, cwnd to FlightSize/2.

- TCP with CWV: Same as Standard TCP.

- Standard TFRC: Calculate X_Bps, send at most $2*X\_recv$.

- Revised TFRC: Calculate X_Bps, send at most $recv\_limit$.

-                 In addition, modify X_recv_set.

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-    Table 4: Response to a loss during a data-limited period.

-            (From Appendix C.4.)

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Changes from draft-ietf-dccp-rfc3448bis-04:

- Removed a restriction in step 4) of Section 4.3 about checking if the sender was not data-limited, when the sender has been in initial slow-start. It is no longer needed. Feedback from Arjuna.

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- Added pseudocode to Section 8.2.1 on "Determining If an Interval Was a Data-limited Interval", fixing a bug in the procedure. Feedback from Arjuna.

Changes since draft-ietf-dccp-rfc3448bis-05 (not yet submitted):

- Editing in response to AD review from Lars Eggert. Using normative language (MAY, SHOULD, REQUIRE, OPTIONAL, etc.), fixing a few nits.
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Changes since draft-ietf-dccp-rfc3448bis-05 (not yet submitted):

- Added text about CCID-3 and CCID-4:

- "CCID-3 and CCID-4 implementations SHOULD use this document (rfc3448bis) instead of RFC 3448."

- SHOULD or MAY, in the sentence above?

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Changes since draft-ietf-dccp-rfc3448bis-05 (not yet submitted):

- Editing in response to feedback from Gerrit Renker.
- To be discussed on the mailing list.
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