



# A New Congestion Control in Bandwidth Guaranteed Network draft-han-tsvwg-cc-00

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# Prerequisites

- **Bandwidth Guaranteed**

- **Current Solution Examples**

- out-of-band signaling protocols: such as RSVP [[RFC2205](#)] and NSIS [[RFC4080](#)]

- in-band-signaling as proposed in [[I-D.han-6man-in-band-signaling-for-transport-qos](#)]

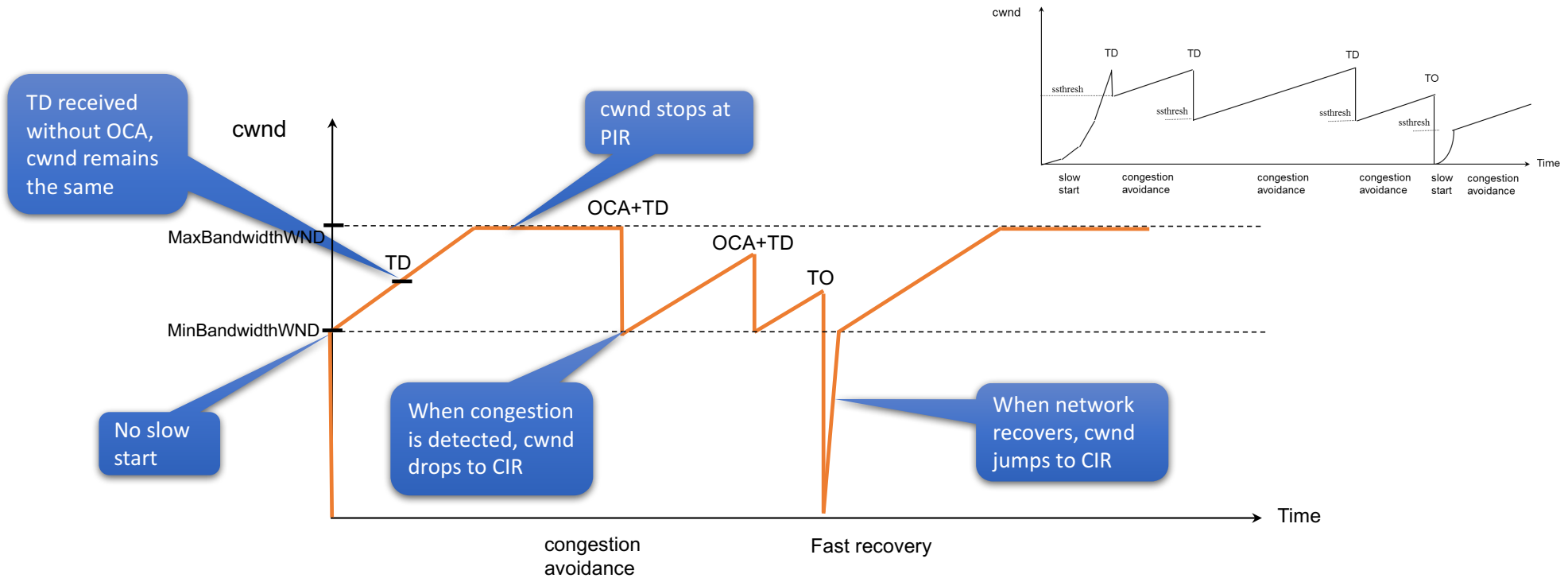
- The common objective of all these solutions is to have network resources/bandwidth reserved before data is transmitted.

- **Use of OAM**

- To constantly report on network condition parameters.

- Important that OAM is able to detect if any device's buffer depth has exceeded the pre-configured threshold, as this is an indication of potential congestion and packet drop.

# Congestion Window Comparison TCP-Reno



TD: Triple duplicate acknowledgements  
 TO: Timeout  
 OCA: OAM Congestion Alarm

# Summary

- cwnd (TCP-Reno) based CC for bandwidth guaranteed TCP.
- No slow start, no ssthresh. cwnd jumps to CIR after start or fast-recovery.
- During congestion avoidance, cwnd stays between CIR and PIR.
- If there is no congestion loss, cwnd has a flat top rate as PIR.
- OAM is used together with duplicate ACKs to detect whether a packet loss is due to congestion or random failure or permanent physical failure.

## Next Steps

- Collect/address comments
- Refining PoC

Question?

Thank You