NADA implementation experiences

Julius Flohr
University of Duisburg Essen
IETF 103 Bangkok
Intro

• NADA implementation in Omnet++/INET

• updated to draft-ietf-rmcat-nada-09

• This presentation should serve as an independent validation of the NS3 model
  → https://github.com/cisco/ns3-rmcat
Setup

- Focus on draft-ietf-rmcat-eval-test-07 test case 5.6: Media Flow Competing with a Long TCP flow

- We use SCTP instead of TCP: New Reno CC, maybe different ACK strategy

```
+----+          +--+          +----+
|S1|----- \      \           / ===|R1|
+----+   \   \   /          /     +----+
      \  /   /      \          |
      \ /   /      /          +----+
      +-----+                             +-----+
        | A                              | B |
        +-----+                             +-----+
          \   /                             \   /
          \ /                             /   /  <-- Backward
          +-----+                       +-----+
                | S_sctp                   | R_sctp |
                +-----+                       +-----+
                      \                     /   /
                      +---------+           +----+
```

- 1 Mbps Bottleneck, 60ms pDelay, 300 ms max. qDelay (no jitter)

- Prefect fixed fps video encoder

- Currently no accelerated ramp up mode
Test Case 5.6

- 1 Mbps Bottleneck, 60ms pDelay, 300 ms max. qDelay
Test Case 5.6

- 10 Mbps Bottleneck, 60ms pDelay, 300 ms max. qDelay
Test Case 5.6 (trace based)

- Cisco syncodec - Trace based with scaling (Foreman_lookahead_1)
Conclusion

- Evaluated large parameter spectrum
- Both implementations seems to behave identically
- Feel free to ask for specific simulation scenario.