



Towards User-Centric Rate Adaptations for VoIP Traffic

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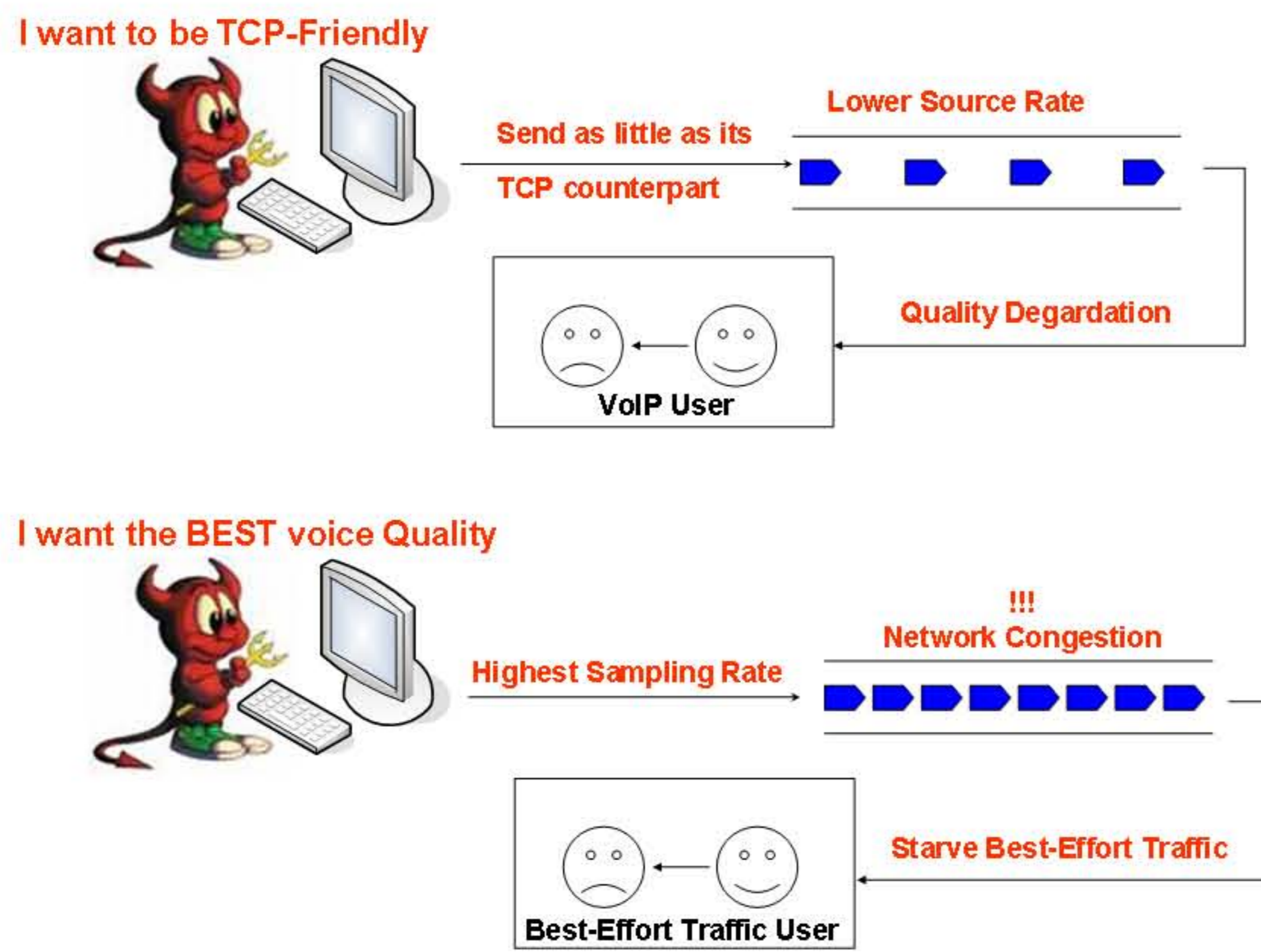
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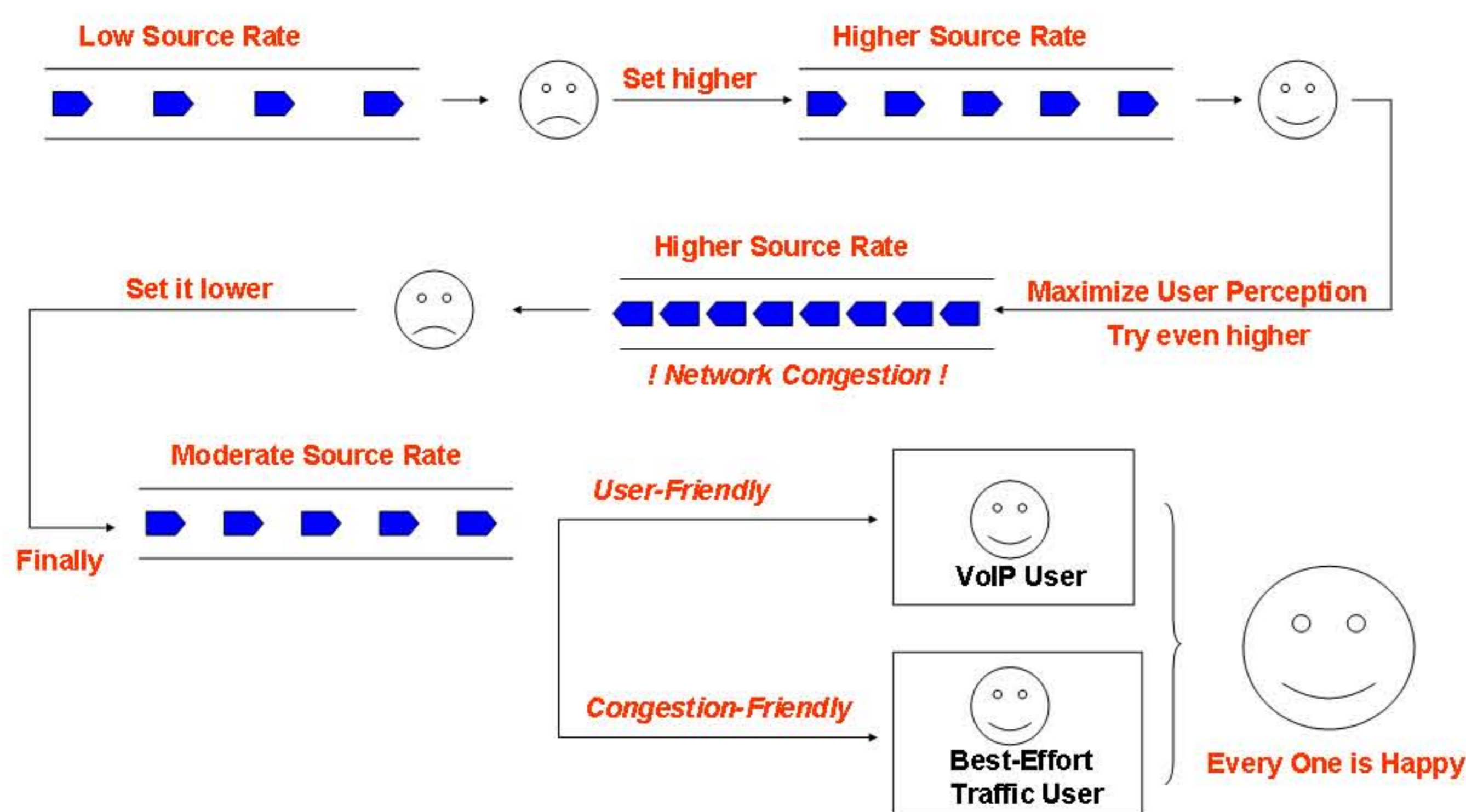
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VoIP Quality Dilemma



User/Congestion-Friendly Rate Adaptation

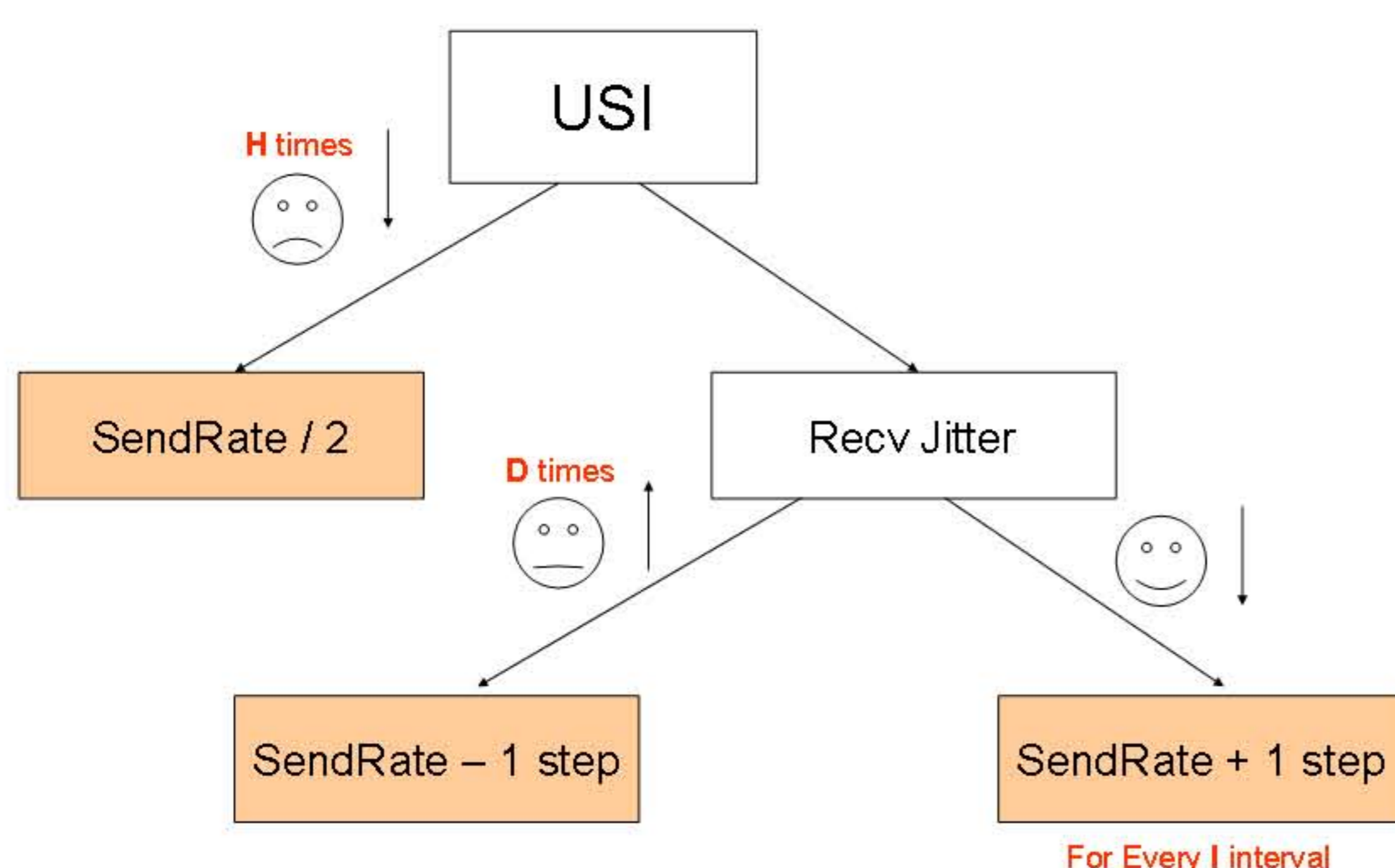


User Satisfaction Quantifying Equation

$$USI = 2.15 \times \log(R) - 1.55 \times \log(J) - 0.36 \times RTT$$

R: Recv Rate J: Jitter

Algorithm



Preliminary Result

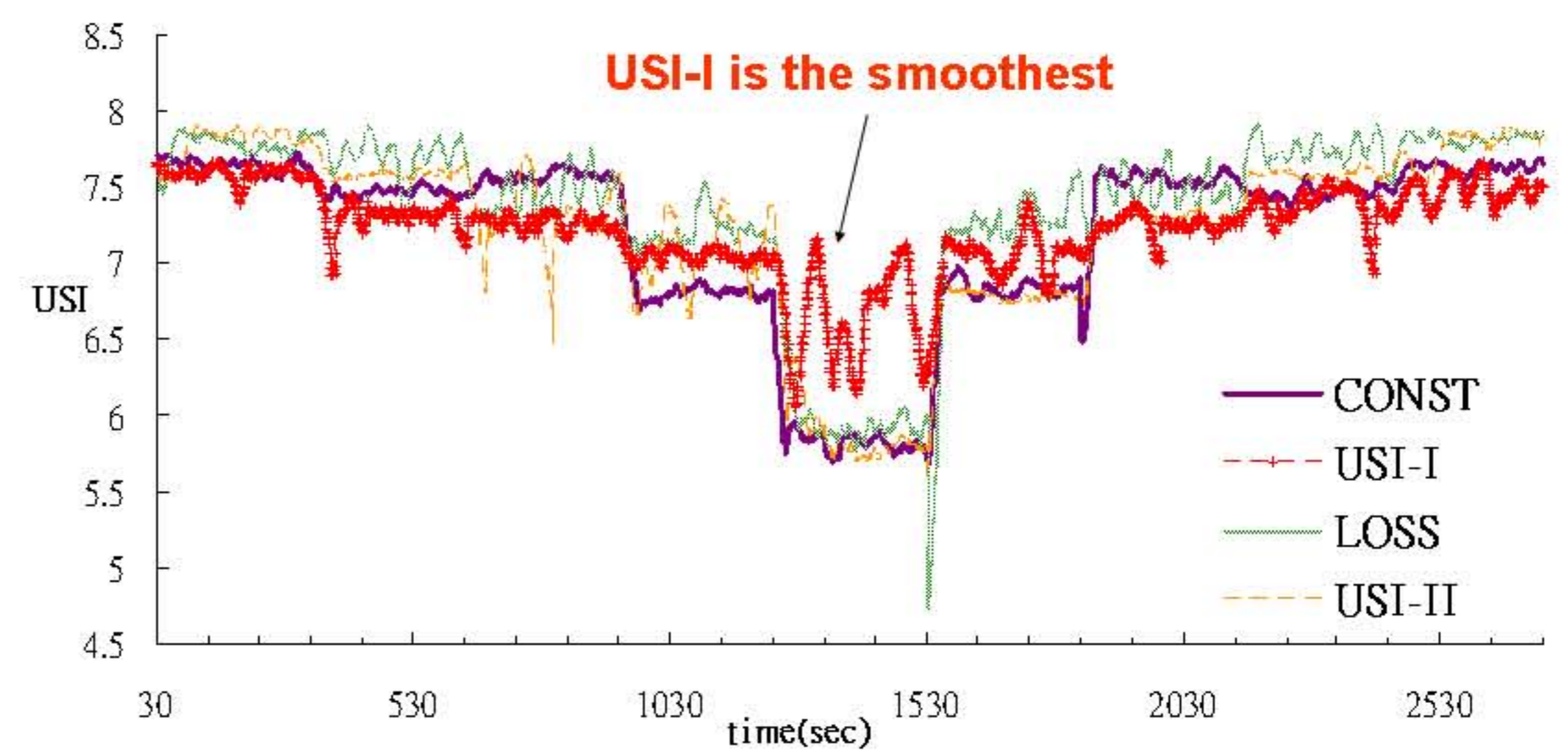


Figure 1 USI result of the Four mechanisms

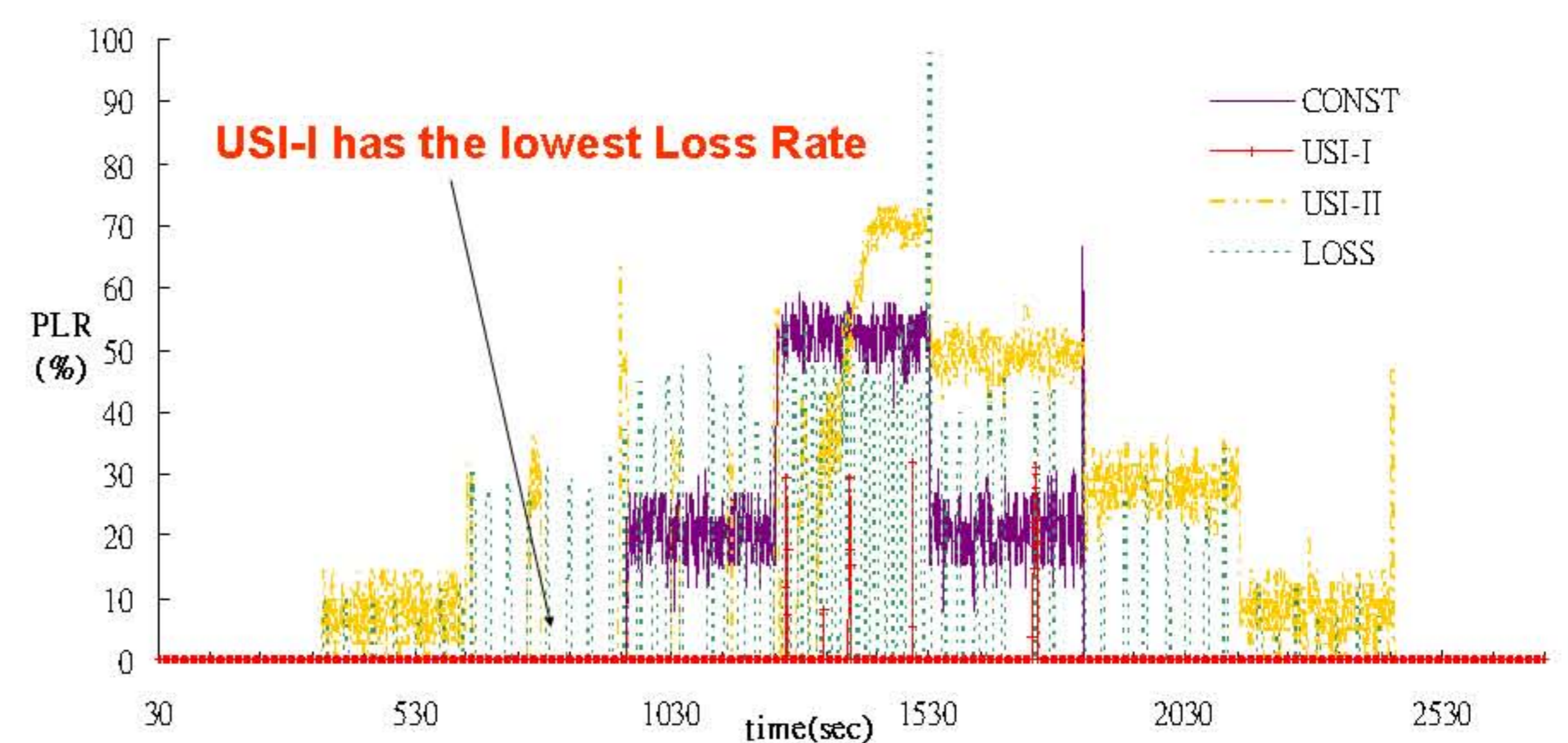


Figure 2 Packet loss rate of the Four mechanisms

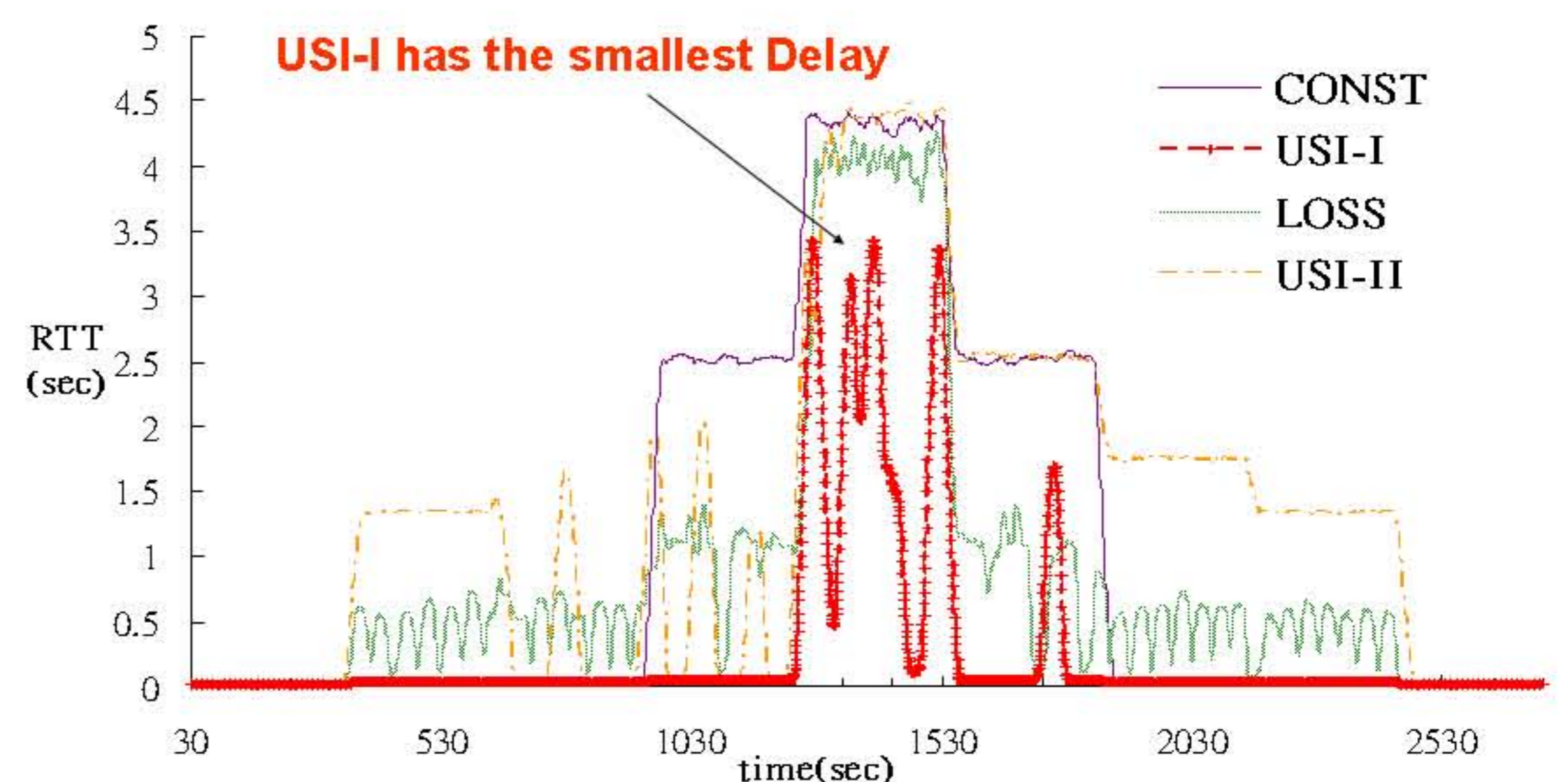


Figure 3 RTT of the Four mechanisms

Summary

- User-centric Rate Adaptation is a promising alternative
- However, our approach is sensitive to parameter settings
 - USI-I : H=5, I=4, and D=3
 - USI-II : H=5, I=3, and D=3
- Systematic exploration of the parameter space is needed

