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**AV bridging:**  
**Time-synchronization clocking**

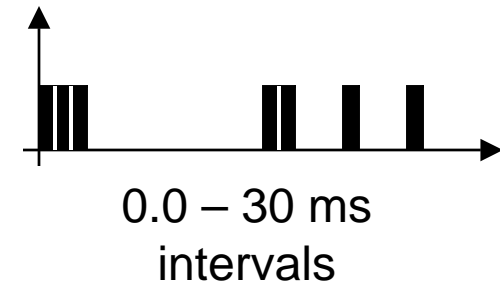
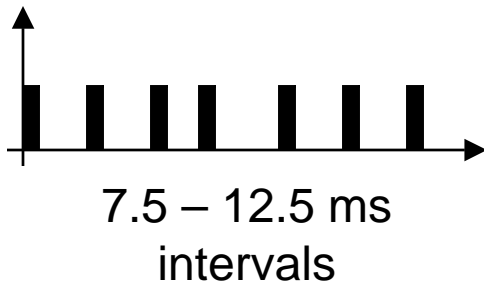
David V James

# RE-SG basic requirements

- Media friendly
  - Link-dependent time-sync intervals
  - Clock-master or clock-slave initiated
- Accurate
  - Errors limited by snapshot accuracies
  - Eliminate: gain peaking
  - Incorporate: per-stage low-pass filtering
- Responsive
  - RX: linkDelay—neighbor local-clock syntonization
  - TX: Minimal grandTime syntonization
- Simple
  - Minimal residence-time constraints

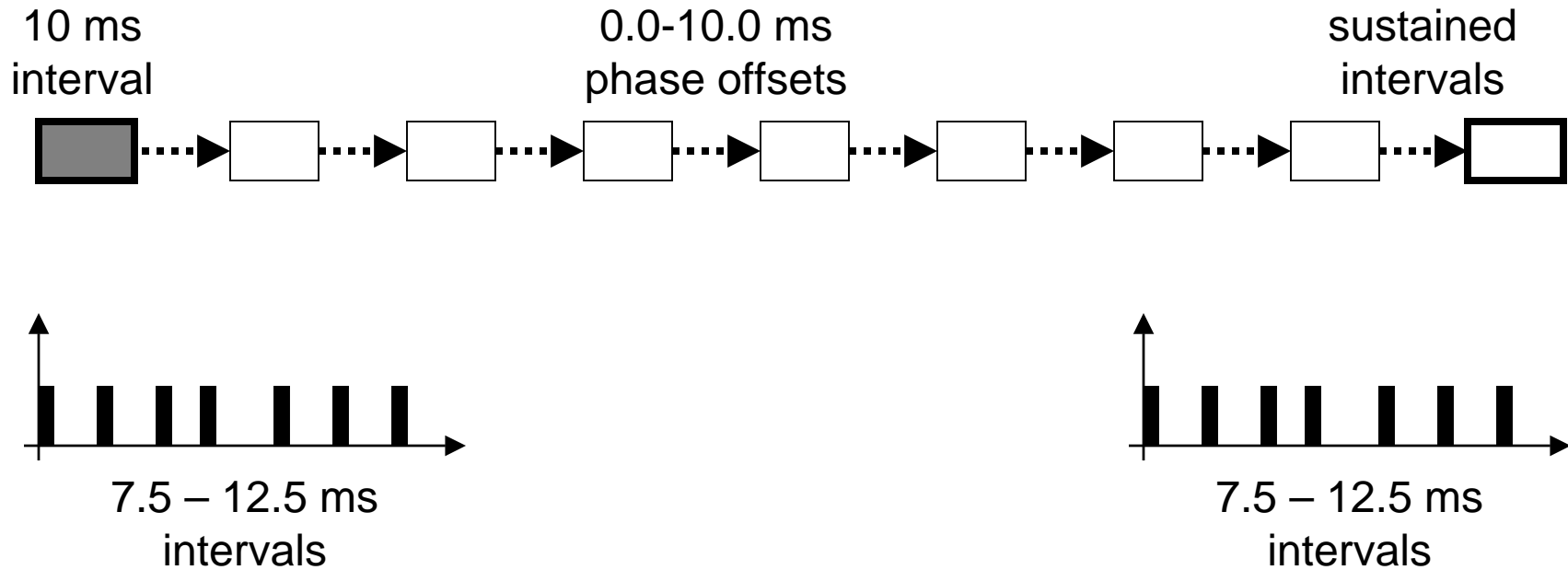
# Cascaded TOD synchronization

(a nonscalable approach)



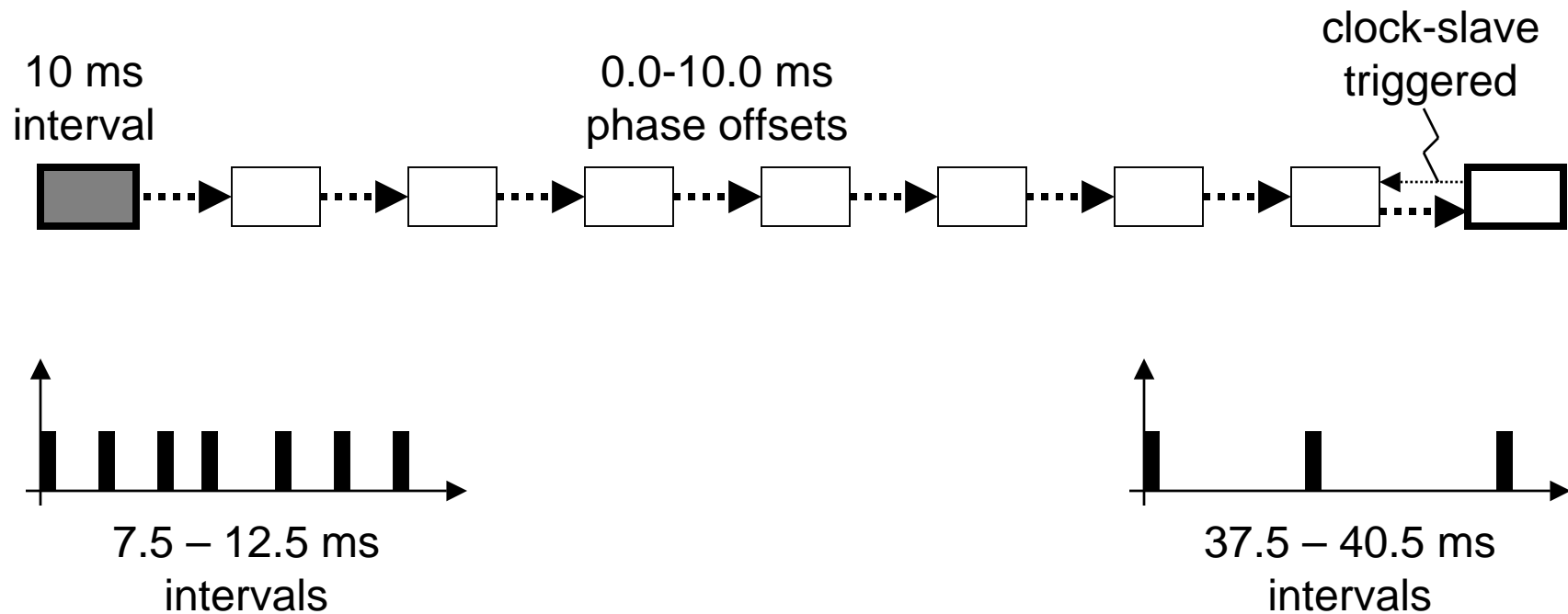
# Reclocked TOD synchronization

(a scalable approach)



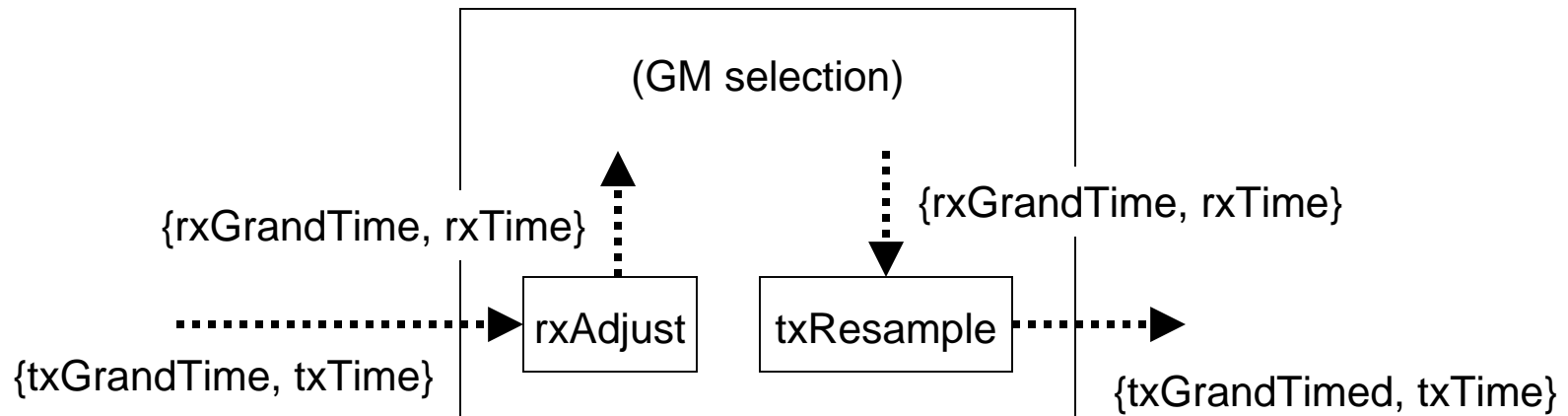
# Slave-triggered synchronization

(a more heterogeneous cascade)



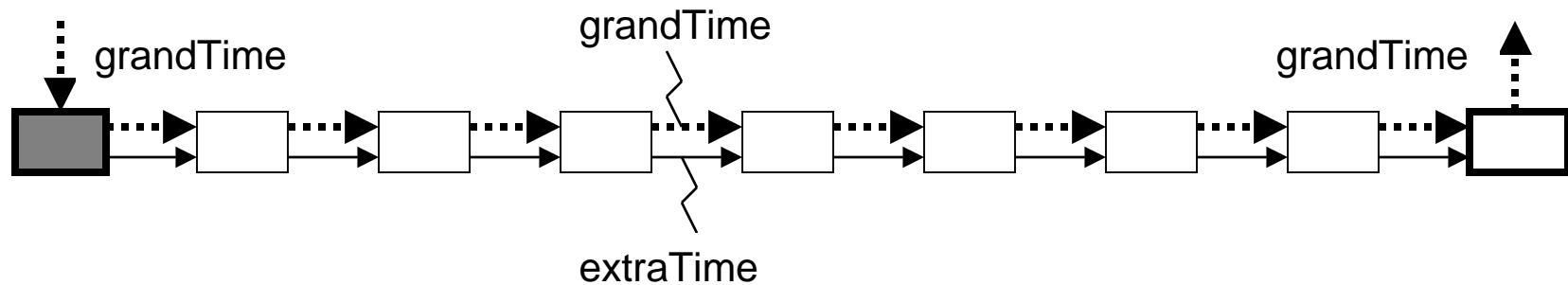
# Rate conversion overview

(decoupled processes)

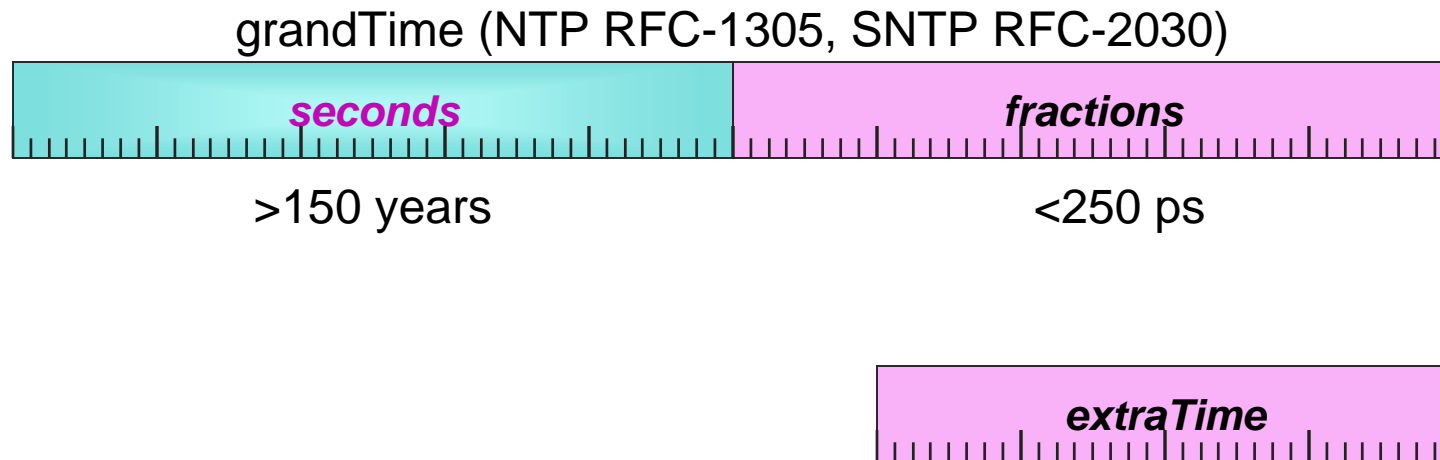


# Gain-peaking suppression

(distinct calibration & deviation indications)



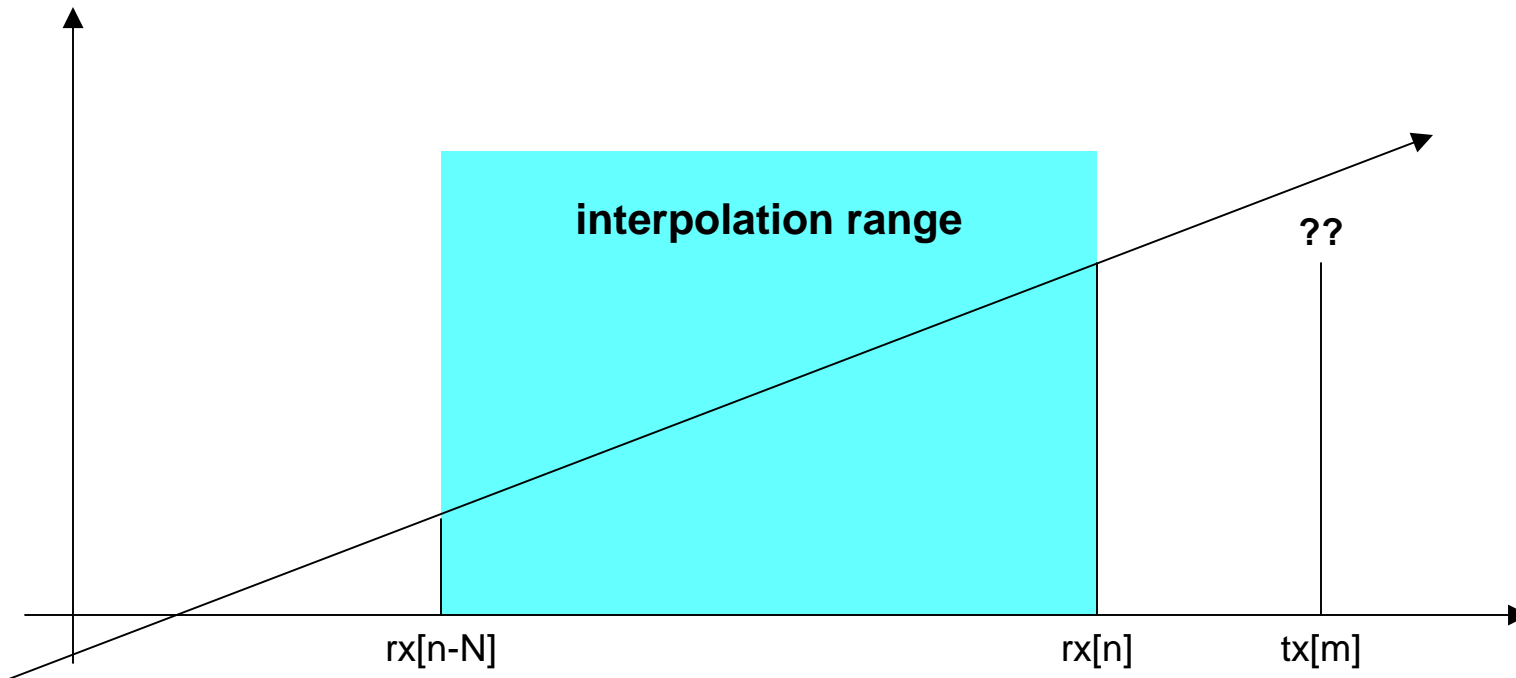
# Time formats





# Interpolation concepts

(interpolation range)



# Interpolation intervals

(interpolation range)

