ITU-T Q13/15 Updates

TICTOC / IETF-82

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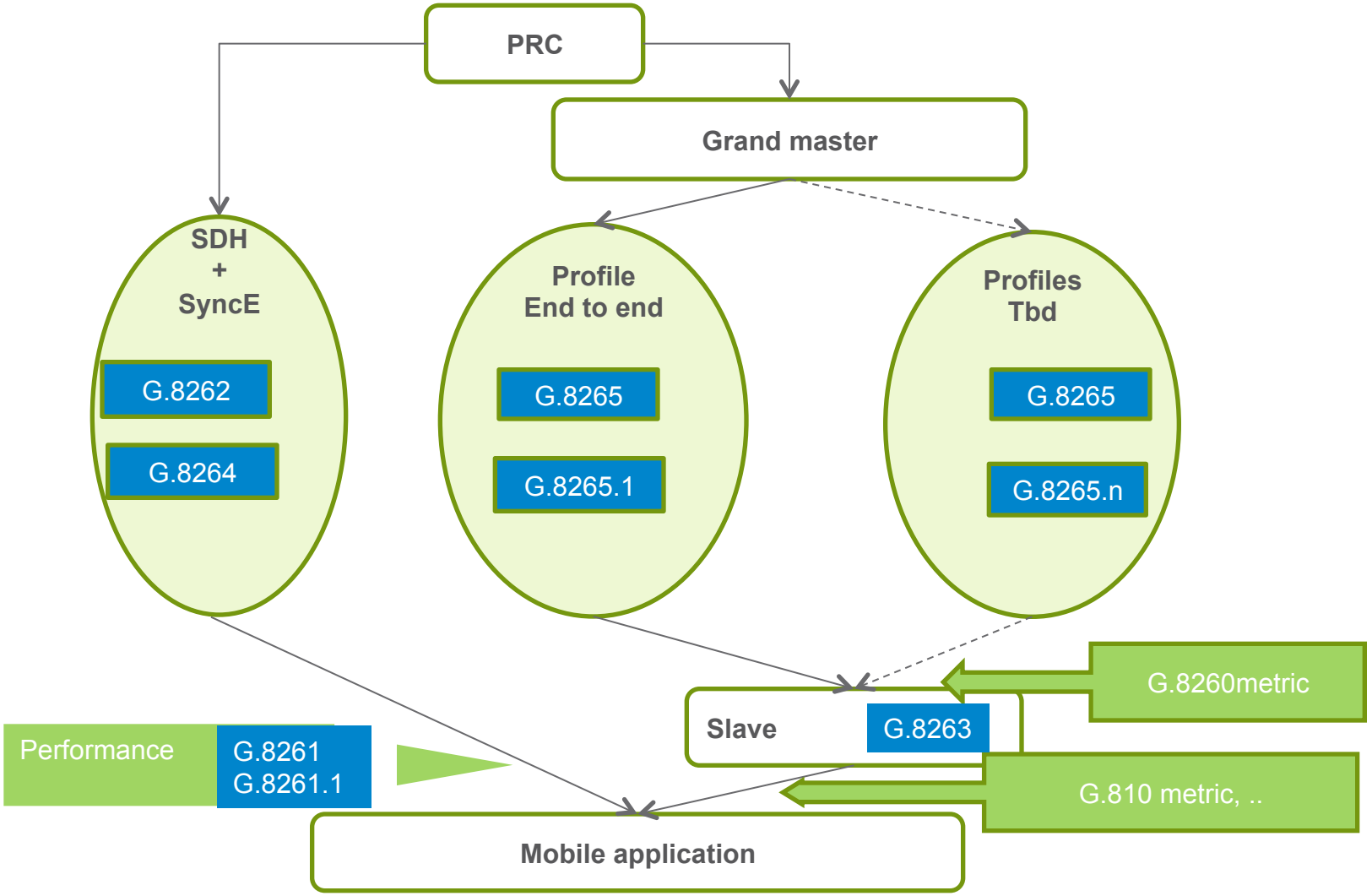
Introduction

- Q13/15 held an Interim meeting in september 2011 hosted by ADVA (York, UK)
- Next meeting: SG15, December 2011
- Some relevant progress on Packet timing performance aspects for frequency (G.826x series)
- Progress on Time Sync in packet networks (G. 827x series)
- SyncE clarifications

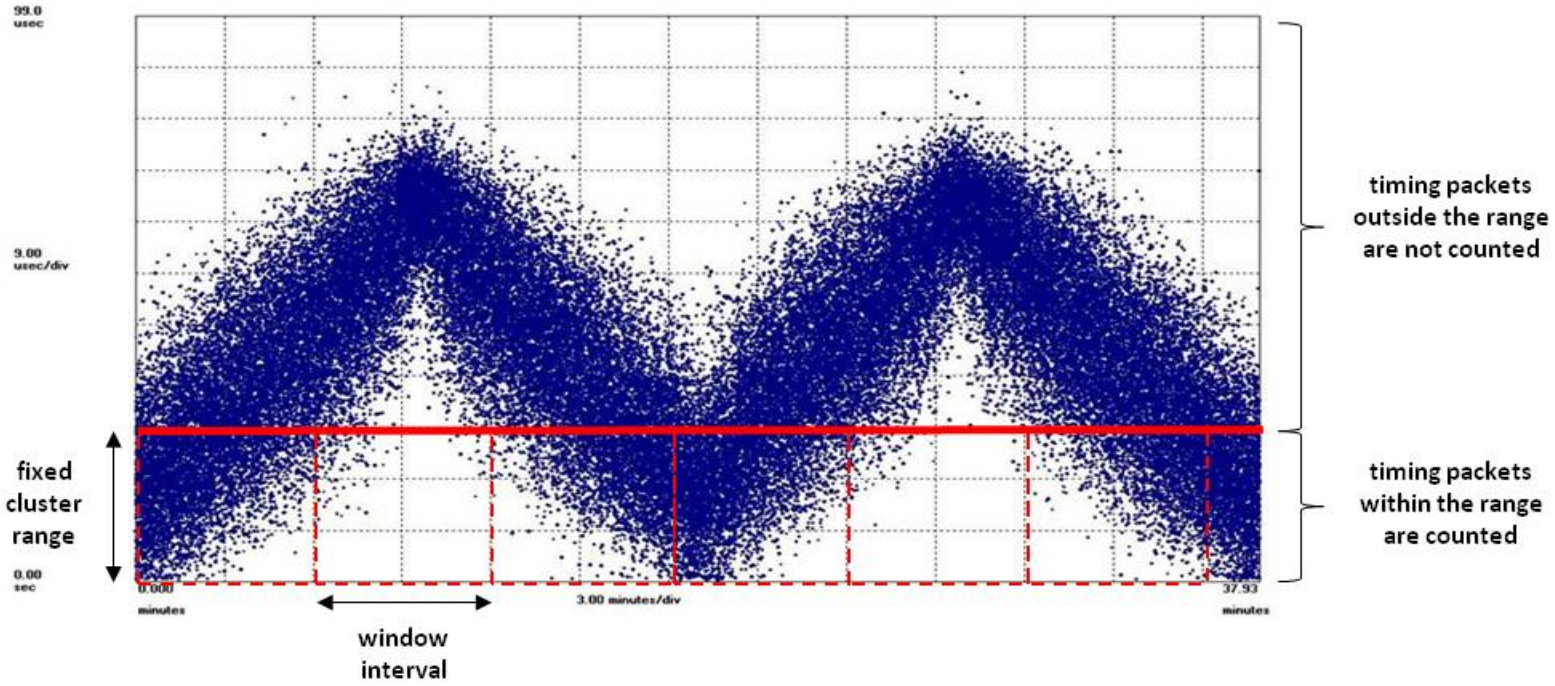
Transport of frequency in packet networks



Frequency SYnc Updates

- G. 8260 expected to be consented at next SG15 meeting, December 2011
  - –PDV metrics
- G.8261.1 expected to be consented at next SG15 meeting, December 2011
  - –PDV Network limits
- G.8263 expected to be consented at next SG15 meeting, December 2011
  - –Packet clock specification

PDV metrics studying minimum floor delay packet population



Those packets arriving within the range are counted each window interval. This count is compared against an acceptance criterion for each window interval.

This class of metric is planned to be used in the first release of G.8261.1 to define the PDV network limit

G.8261.1: Network limits for frequency transport

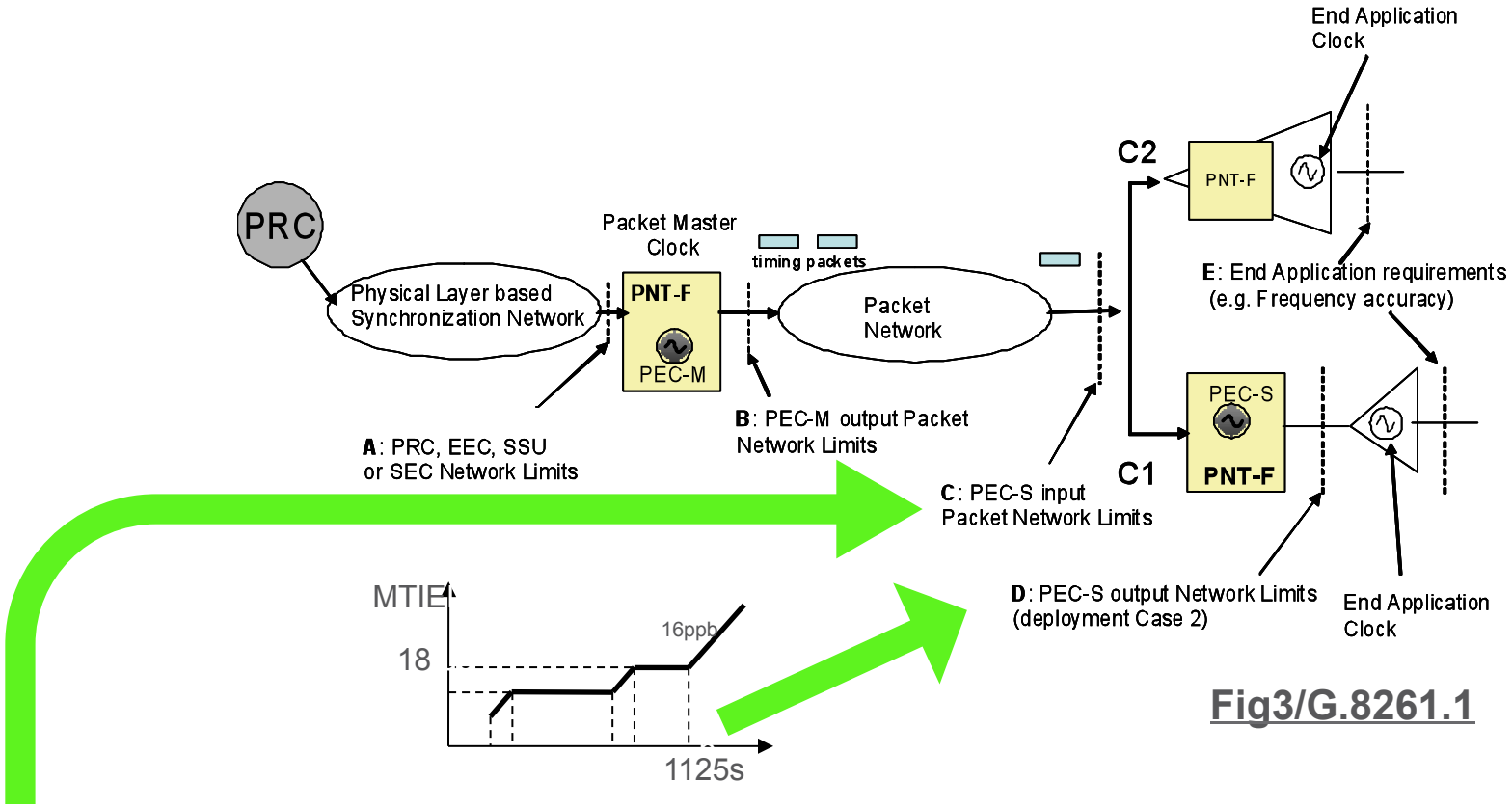
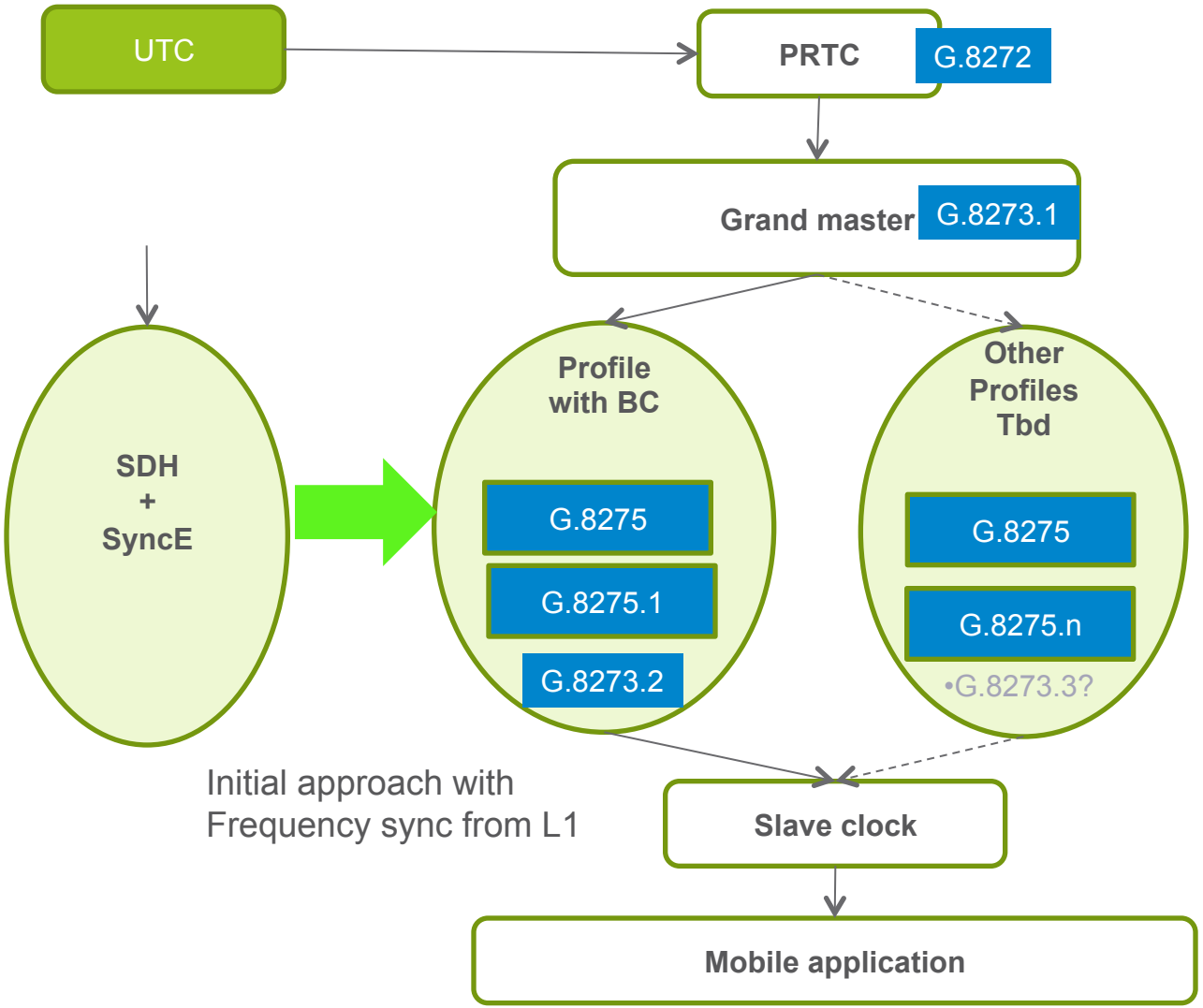


Fig3/G.8261.1

For any window interval of 200 seconds (jumping window), at least 1% of timing packets with a minimum of 2 timing packets must be observed within a fixed cluster, located at the observed floor delay, and having a range of 150 µs.

Transport of time in packet networks



Time Sync Updates

- Network Limits (G.8271)
  - G.8271 expected to be consented at next SG15 meeting
  - Initial results of simulations for Time sync over 20 BC chain with SyncE support (Network Limits):
    - Random noise in the 100/150 ns range
    - Static asymmetry needs to be controlled
  - Initial agreements on Time sync interface (1PPS)
- Time Sync Architecture and PTP Profile (G.8275 and G. 8275.1)
  - Recommendations planned to be consented in 2012
  - No draft updated at last meeting
- Time Sync Clocks (G.8272, G.8273.x)
  - Recommendations planned to be consented in 2012
  - No draft updated at last meeting

SyncE

- G.8264 Amendment expected to be consented at next SG15 meeting, December 2011
  - Clarification on SyncE over LAG
- G.8262 Amendment expected to be consented at next SG15 meeting, December 2011
  - Clarification on SyncE over copper 1G and 10 G (Autonegotiation issue)

Current DocUment Structure

Agreed | Consent Dec2011? | Ongoing | Future …?