Will timeout work?

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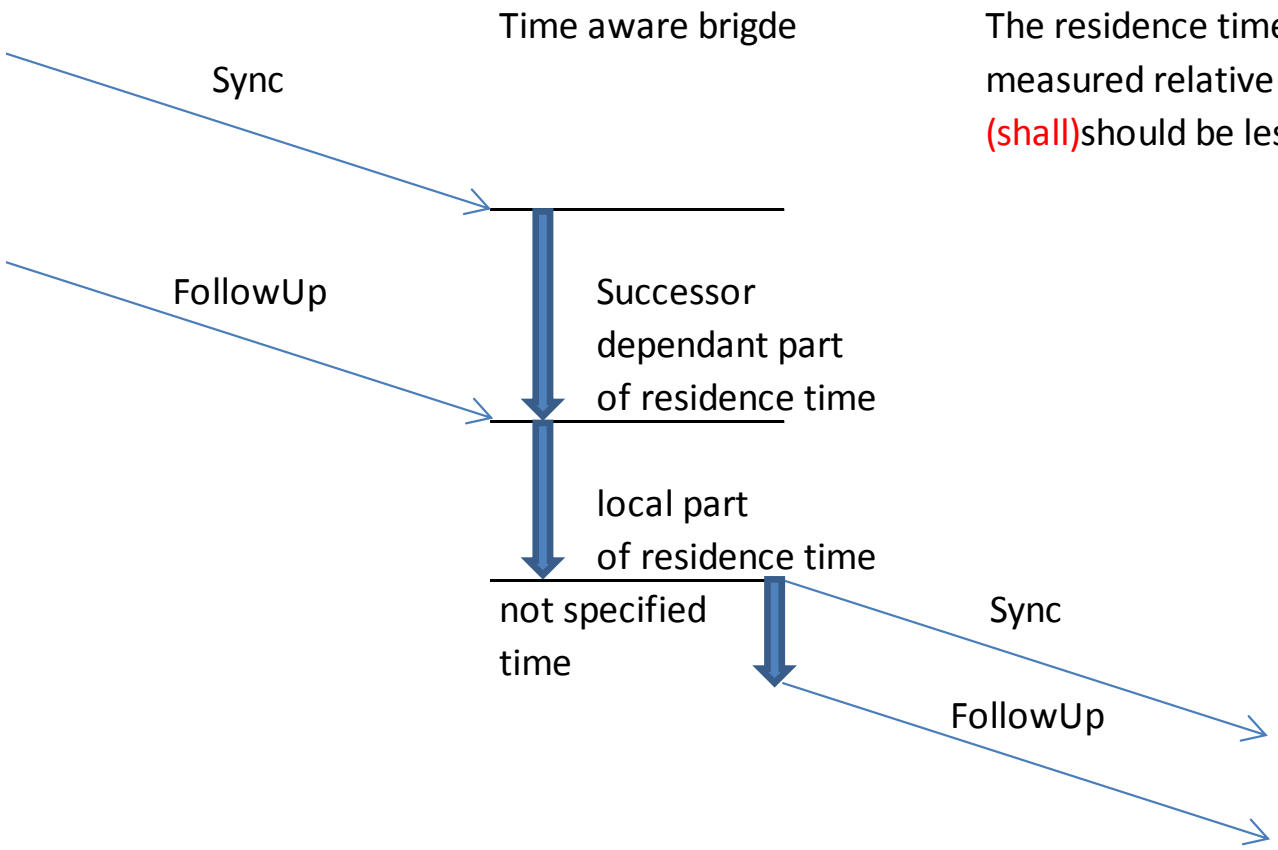
Definition of forwarding



The residence time (see 3.17) of a time-aware system, measured relative to the TAI frequency (see 8.2), (shall)should be less than or equal to **10** ms.

The delays are not specified

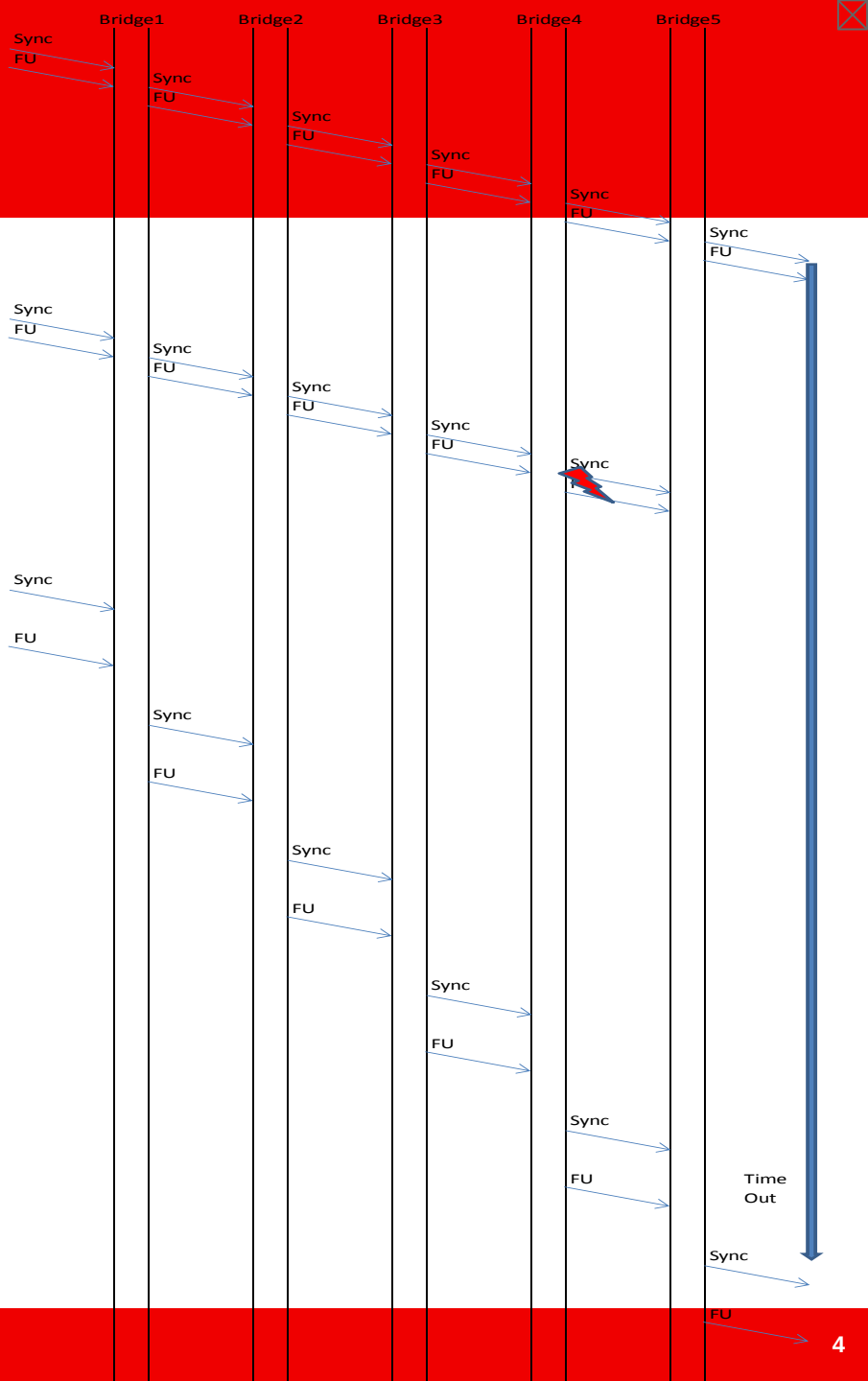
- Delays have negative effects on time quality
  - Control loop error and statistical error
  - Unpredictable Performance
  - Special critical factor:
    ….. Variation in delay
- Under this circumstances we should at least assume a delay between 0 and 20ms
- This could cause easily a gap **greater than 100ms** with 7 bridges in between

Delay Variation cause Timeout

Situation

- Delay occurs in third sync
- Second Sync lost
- Delay:
  - Sync ➔ FU: 1/15ms
  - FU➔ Sync: 1/15ms
- 5 bridges cause add delays:
  5*28=140ms
  ➔ more than one cycle

➔ We need a flexible timeout:
= 3 Periods
+NumberHops*ResidenceVariation



Additional specifications for timeout

- The impact of delays (delay variations) to the timeout shall be specified

- More precise definition of residence time required for 2-step
  - Residence time (eff): between followUp(RX) and sync(TX)
  - Residence time (react): between sync(TX) and followUp(TX)

- Default timeout value (3) apply for „**low residence time jitter nodes**“

Residence time variation * Number of hops

is less than Sync Interval

Thank You!

We like smart high performance solutions!