draft-ietf-avt-mwpp-midi-rtp-06.txt

- ❏ Since Atlanta:
    - ▶ Normative: `-06.txt`.
    - ▶ Guidelines: `-01.txt` and `-02.txt`.

- ❏ MMA/AMEI
    - ▶ From wish list ... to requirements.
    - ▶ `-07.txt` in progress.
    - ▶ Today: a few interesting design issues.

- ❏ IEEE P1639
    - ▶ Phil Kerr @ Sunnyvale Starbucks.
    - ▶ Provide clear choices.

Timing: **Precision Senders**
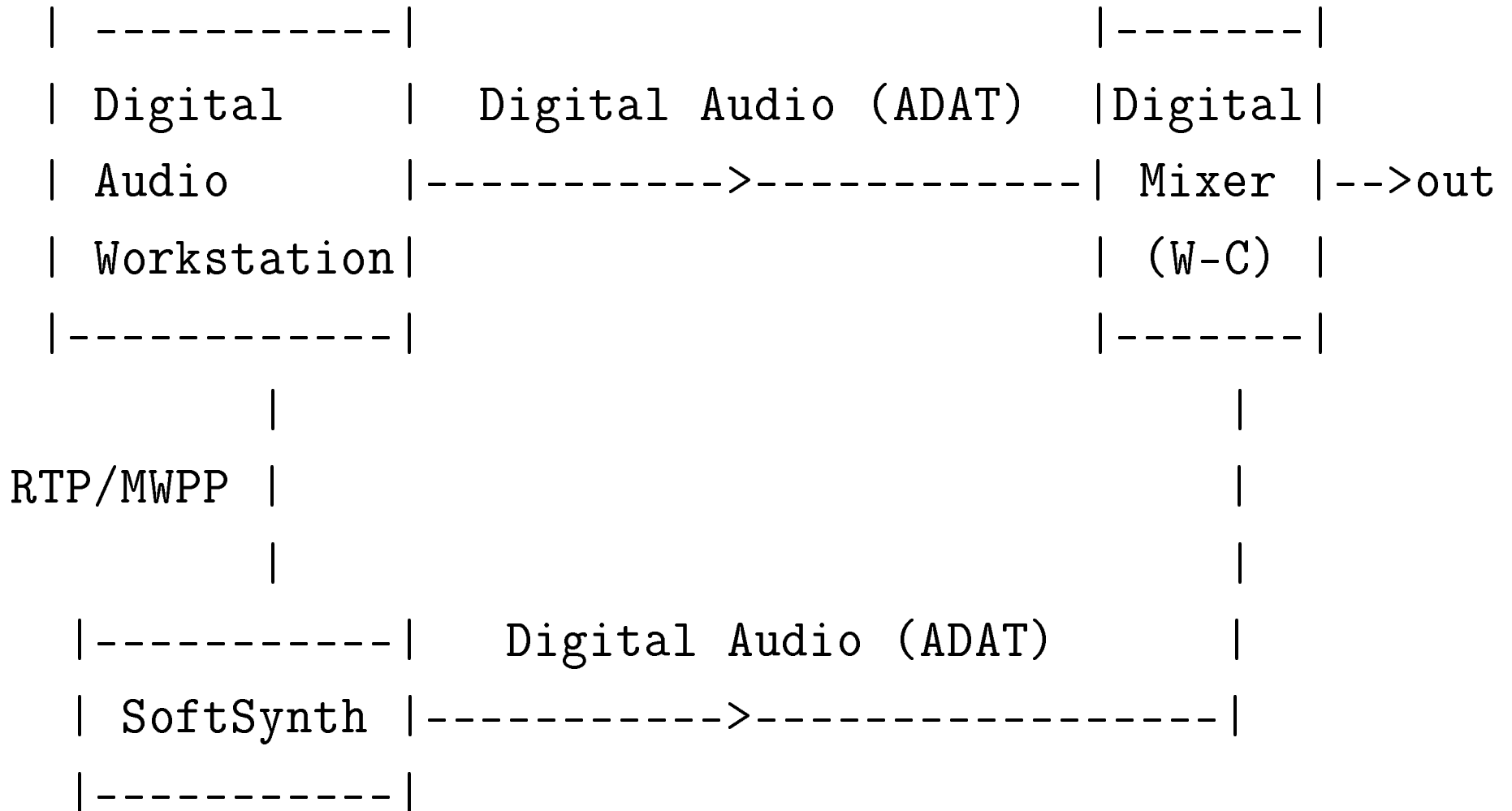
❏ MIDI 1.0 Cables (async serial)

   ▶ No timestamps → time-of-arrival.

   ▶ Request: pseudo-wire emulation.

   ▶ Use together with timestamps on LANs.

❏ Design Elements

   ▶ `fmtp` parameter: precision sender.

   ▶ Last command → sending time.

   ▶ Last command may be null.

   ▶ Normal `ptime` and `maxptime`.

Timing: Multi-format Sync

```
 | -----------|                            |-------|
 | Digital    |   Digital Audio (ADAT)     |Digital|
 | Audio      |----------->------------|   | Mixer |-->out
 | Workstation|                            | (W-C) |
 |------------|                            |-------|
       |                                       |
  RTP/MWPP |                                   |
       |                                       |
  |-----------|    Digital Audio (ADAT)        |
  | SoftSynth |----------->------------------|
  |-----------|
```

Multi-format Sync Options

❏ Specify rendered output time.

    ▶ NTP units, relative to RTCP NTP.

    ▶ Assumes accurate NTP sync.

    ▶ "Calibration-free"

❏ Specify packet buffer latency.

    ▶ Nominal value, low variance.

    ▶ Manual calibration.

❏ "Do not do this."