

SEDATE

November 9th, (Tuesday), 14:30–15:30 UTC
(15:30–16:30 CERT, 06:30–07:30 PST)

draft-ietf-sedate-datetime-extended-01

draft-ietf-sedate-datetime-extended-01, 2021-10-20

8 issues open on [github](#). Proposed structure of discussion:

0. **what are we doing here, anyway?**

1. overall format, extensions to RFC 3339 timestamp
2. timezone extensions
3. naming the other extensions
4. single-char namespace
5. multi-char namespace

(0) what are we doing here, anyway?

Extend RFC3339 timestamps

- to provide additional information (annotation)
- to change the semantics (modification)

RFC3339:

- **UTC timestamp**
- annotation: timezone **offset**

Next slides: What is proposed for SEDATE
(grouped by **semantics**, not syntax)

(0) ... Proposals for SEDATE (1)

(a), (b), (c), (d) as per <https://mailarchive.ietf.org/arch/msg/sedate/EinM-eZ8NrvrprUPxD_fw57ssXM>

Annotations (more information, core still timestamp):

- (a) add human-readable timezone [Europe/Berlin]
- (d) (other annotations, e.g., display hints)

Modifications (converges to timestamp after uncertainty):

- (b) make tzinfo override timezone offset
- (b1) leave out timezone offset in (b)
 - [less useful for disambiguating "fall back" ambiguity]

(0) ... Proposals for SEDATE (2)

Other modifications, e.g.:

- timescales (TAI vs. UTC) #8

including weird forms such as Bron's tz-tai: <<https://mailarchive.ietf.org/arch/msg/sedate/BM2vU0ow4WUAz-3JaXwKvd6iq2k>>

New semantics:

- (c) floating time (for calendaring)
 - (becomes timestamp only after adding local context)

(0) ... what do we need to decide

1. Should we do modifications in this WG?
2. ... and/or completely new semantics?
3. Should we allow things that are **not** timestamps to look like RFC3339 extensions?

Argument for 1/2: We could make sure that these things mesh well with what we are already chartered to do

(Reminder: SEDATE Charter)

[...] datetime data often has additional **context**, such as the timezone or calendar system that was in use when that instant was recorded.

Particularly when using times for interval, recurrence, or offset calculations, it is necessary to know the context in which the timepoint exists. It would be valuable to have a **standard text serialisation format for this contextual data**. This working group will develop and publish a format meeting that requirement, subject to the additional constraints described below.

... SEDATE charter ...

- This format must be able to **round-trip** through intermediate systems which **do not understand** the full context.
- Systems which don't understand all the contextual fields must still be able to **reliably extract the instant in time**.

This format will be a companion to RFC 3339 rather than a replacement, embedding **unaltered RFC 3339 data** in a way that makes it easy to parse just the datetime data independently of the context.

... **SEDATE charter**

Changes to RFC 3339 are explicitly **outside the charter** for this WG.

If a need for an RFC 3339bis [???] emerges, this WG must recharter before performing that work. In this case, the changes to RFC 3339 will need to be clearly motivated, evaluated and precisely scoped during the rechartering process, and will need to make only changes that keep the timestamp specification a profile of current versions of ISO 8601.

Stability of the RFC 3339 timestamp format is important to existing IETF protocols and the Internet generally, and any rechartering process should frown on anything that would invalidate the existing timestamp format.

(1) overall format, extensions to RFC 3339 timestamp

- overall syntax (e.g., #5 -- ASCII vs. UTF-8)
- **meaning of receiving extensions not understood**

Do we simply add on text to an RFC 3339 timestamp or do we do surgery on that, too (e.g., #7 -- floating time)

The format probably needs a name (\neq WG name), #9.

(2) timezone extensions

Relatively stable part of the specification.

What does it mean for a recipient that a timestamp has a timezone extension?

Is this purely informative, or does it change the meaning of the RFC 3339 part of the timestamp? #3

TZDB not static -- not even in the timezone names.

What does this mean wrt forward compatibility of extended timestamps? #6

(3) naming the other extensions

The idea of delegating namespaces:
registry in the draft doesn't register extensions, but namespaces, which are names for organizations that define and keep registries for extensions.
Do we need this indirection?

X-Dash (RFC6648) considerations #2, or more specifically: how does the naming of an extension evolve over its lifecycle (proposal, first implementations, formal acceptance, wider use)...

(4) single-char namespace

Who exactly defines the u- extensions?

Just having a locale extension registered in BCP47 doesn't mean that a corresponding timestamp extension already has a well-defined meaning.

Will there be single-char namespaces beyond u-?
Why aren't we saying anything about them, then?

(5) multi-char namespace

- Section 3.3: ~ requirements on an organization.
Org then publishes IETF RFCs
that they register in their own registries (🤔)
- Significantly more complex than RFC8126-style registry.
 - DE (designated expert) could receive instructions that mirror the MUSTs currently in the section.
- Could still reserve extension name prefixes
(== register namespaces)