

Kenobi Versioning (ob1)

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Kenobi versioning views a document as existing *now*, with all earlier versions interpreted as obsolete historical examples of how the document once looked. Just as the generic name of a smartphone app always refers to the latest version of that application, the generic name of a Kenobi document always refers to the latest version of that document. Obsolete historical versions, if any, are relabeled *ob1*, *ob2*, ... to distinguish them from the living document. Publishers uniquely identify each of their documents by beginning its online name with a human-readable and easily sorted *inception date* that specifies when the most critical concept or data that defines the document was first created (incepted). Depending on how many documents a publisher expects to create, the inception date of a document may also specify an hour, minute, second, or arbitrary decimal fractions of a second (e.g. for data logging). Kenobi versioning uses [Creative Commons Zero \(CC0 1.0\)](#) public domain access, and can be copied, modified, and used for any purpose, including for-profit commercial, without any need for attribution or permission.

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This is about: Document versioning

I. INCEPTION DATES AS UNIQUE NAMES

Kenobi documents reside on the web, with URLs of the general form [https://publisher/ideate\[.obn\]+optinfo](https://publisher/ideate[.obn]+optinfo). The *ideate* or *inception date* is always a real span of time that is by default one day in length, but can be arbitrarily precise. The publisher can assign the *ideate* somewhat arbitrarily, such as when only an inception month is known, but it should always try to reflect when the defining concept or data of the document was first created or *incepted*.

Once assigned, the *ideate* permanently and uniquely identifies the document for that publisher. It must specify at least a specific day in history, with additional time data appended as needed for multiple documents published on a single day. 24-hours, minutes, seconds, and arbitrarily precise decimal fractions of a second can be appended:

<https://smallpub.com/docs/1984-02-27.pdf>
<https://mediumpub.com/1776-07-28.23.html>
<https://hugepub.com/pdf/2008-05-30.23.59.pdf>
<https://millisecdatalogger.org/2020-12-29.23.56.53.998>

Note that the inception date is *not* a publication date, and

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**This document uses [Kenobi versioning](#). The online name always points to the most recent document version, while *ob1*, *ob2*, ... suffices indicate obsolete releases of the document.*

may precede online publication by days, months, years, or even centuries, such as might be the case for publishing Isaac Newton diary entries. The inception date goal is to identify the document uniquely by leveraging its origins in real history, and from then on keep that label invariant as the document changes. For open online data logging of shared, time-based data, inception dates can be used as time stamps, which is possible since arbitrarily precise digital fractions of seconds are permitted.

Since inception dates do not change as the contents of documents evolve, they also make good DOI numbers. Both to keep such DOI numbers short and to provide mild obscuring, all non-digit (e.g. hyphen, period, or underline) characters can be removed, leaving a pure digit string.

II. OBSOLETES AND OB NUMBERS

When a new version of a document is created, the previous version becomes an *obsolete version*, and is so indicated by immediately appending its *ideate* label with an *obn* number of the form *.ob1*, *.ob2*, ... to indicate which obsolete version it is. The default form of the number after the letters *ob* is a simple integer without any zero padding, e.g. *ob1* rather than *ob01*, as is the case with most version numbers. However, this format can also be extended and made more precise at the choice of the publisher, such as when if they expect to generate numerous obsoletes. Extended *ob* numbers can for example use a fixed number of digits (left zero padding), and they can append one or more sub-obsolete numbers to indicate increasingly minor differences, e.g. *ob2.3.1* or *ob01.03.003*.

III. OPTIONAL INFORMATION

After the *idate* and (if used) *obn* labels, the name of the document or obsolete can if desired include *+optinfo* to provide additional information such as the time zone (e.g. GMT) for globally coordinated inception dates, or citation data such as author and title:

<https://smallpub/2020-12-25%20Santa%20Greeting.pdf>
["https://tarxiv.org/2020-10-16 Bollinger - Kenobi.pdf"](https://tarxiv.org/2020-10-16 Bollinger - Kenobi.pdf)
https://dataloggerjoe/2020-11-09.23.52.59.001_GMT
<https://dataloggerdan/2020-11-09.18.52.59.001-0500>

IV. VOLUME AND EPAGE

As with many technical journals, in Kenobi versioning the combination of volume and a first page is all that is needed to identify a *journal article* class of document uniquely. That is, an issue number is not required, although a redundant one can always be defined.

In Kenobi this is done by making the Volume number identical to the inception year, using format *yyyy*, and the first page of the article identical to the inception month and day in format *mmdd*. Any additional inception time fields appended as needed, e.g. *mmdd.hh*. or *mmdd.hh.mm.ss*. For example, these document names:

["2020-10-16 Bollinger - Kenobi Versioning.pdf"](#)
["2020-12-25.23 Claus - NY Nice.pdf"](#)

... would generate citations containing these numbers:

Bollinger, T., *Kenobi Versioning*, 2020, 1016 (2020).
 Claus, S., *NY Nice*, 2020, 1225.23 (2020).

In Kenobi the first page field used by bibliography data and software is reinterpreted conceptually as an *ePage*, that is, as part of a unique web identifier that is unrelated to physical page numbers. Pages within an article thus should be numbered normally, without any reference to or inclusion of the *ePage* number. This allows page numbers to do what they are supposed to do: Tell readers what page they are on. Particularly with the very flexible pagination of many web document, this also avoid entangling the identity of the document with what are really just viewing issues that should be at the discretion of the reader.

Finally, if for backwards compatibility issues an issue number is needed, it is always identical to *mm*, the two-digit month of the inception date. While this is redundant with the *ePage* information, it corresponds appropriately to the traditional concept of monthly publication that is still used by many physical magazines and some journals.

V. LAST PAGE AS THE OB NUMBER

Another backwards-compatible Kenobi reuse of citation fields is its reinterpretation of the *last page* of a page range (e.g. 231–239). In Kenobi the last page is reinterpreted as the *obsolete number* (ob number) of any version of the

document that is no longer current. For example:

["2000-07-04.ob1 Bollinger - Q Time.pdf"](#)

results in the Kenobi citation:

Bollinger, T., *Q Time*, 2000, 0704–ob1 (2020).

A Kenobi citation that has only a first *ePage* number and no last page is by definition the latest document version.

VI. FULL IDATE FORMAT AND OPTIONS

The full *idate* format is:

`yyyy<mm<dd[.hh[.mm[.ss[.nnn...]]]]`

where `<` is an optional dividing character, and square brackets indicate additional optional levels of time details. The first *mm* means the two-digit month, while the second occurrence (after *hh*) means the two-digit minute. After seconds (*ss*) base 60 notation is abandoned, and the *.nnn...* specifies a purely decimal fraction of one second. This again is not the main use of Kenobi versioning, but it keeps options open for inception dates that are unlimited in both number and degree of time specificity. This allows Kenobi versioning to merge smoothly with forms of web-based publication that include an automated data logging aspect, such as for real-time global posting of astronomical data.

The critical features shared by all Kenobi inception dates is that they must be human readable, and always have the larger time units to the left of the smaller ones. Examples of possible names are:

https://smallpub.com/1984_01_01%20Romania.pdf
["https://smallpub.com/1984-02-23 Smith - Albania.pdf"](https://smallpub.com/1984-02-23 Smith - Albania.pdf)
https://bigpub.com/20200110_First_Part_of_a_title

VII. CONCISENESS IN KENOBI NAMES

An important goal in Kenobi versioning is to provide web document names that are both short and human readable. Since time is a universal parameter for all human activities, including most certainly publication, it provides a good way to enforce unique naming on very diverse publication products, but in a way that still provides at least one bit of critical information about the nature of each of those products: its inception date, which in effect tells when it first began to impact human history.

In keeping with the conciseness goal, it is often useful to restrict the use of *+optinfo* fields to *internal* and *meta data* files associated with the document, while restricting its external (web) name to just its inception date and ob number, if any. At the same time, meta data files can use the same inception date to show they are associated with or give more information about that same document:

<https://tarxiv.org/2020-10-16.pdf>
<https://tarxiv.org/2020-10-16.html>
["https://tarxiv.org/2020-10-16 Bollinger - Kenobi.bib"](https://tarxiv.org/2020-10-16 Bollinger - Kenobi.bib)

In the above example, the first item is the document, the second is a web page (including automated bibliography meta data) for the document. The third file shows how optional information can be added in an adjacent file. In addition to providing the author and title in the file name, it also provides internal (BibTeX) data that contains document metadata in a form usable by many legacy citation tools. The use of the unique inception date at the start of such files ensures they will stay associated.

X. SUMMARY

VIII. ASSIGNING ARBITRARY INCEPTION DATES

In cases where the exact inception day or even month of a document is not known, the default is to begin at the earliest time of the possible range, including the year, with a default of 01 for both the month and the day:

["1589-01-01 Galileo - My Gravity Trial.pdf"](#)

Colliding names should then increment the day, and the month if needed, by 1 each time a new document is added:

["1589-01-01 Galileo - My Gravity Trial.pdf"](#)

["1589-01-02 Galileo - My Second Gravity Trial.pdf"](#)

IX. BALANCING CONCISENESS WITH OUTPUT

Publishers who produce less than 300 works per year in time-sequenced order can use the concise `yyyy<>mm<>dd` format to uniquely name each work, e.g. [2020-10-16](#) or [20201106](#) for a work incepted on October 16, 2020. If a second or third work is incepted on the same day, the extended-time format with hours and minutes can be used:

<https://smallpub.com/1984-02-23.pdf>

<https://smallpub.com/1984-02-23.12.30.pdf>

<https://smallpub.com/1984-02-23.23.59.pdf>

There is no need to rename the first document, since the additional time stamps will keep any further documents uniquely identified. While this approach of “short first, long only if needed” makes naming less regular, for a small publisher it keeps most web URLs very short.

Large publishers who know they will have many documents per day may prefer to only extended times:

<https://bigpub.com/1984-07-18.00.00.pdf>

<https://bigpub.com/1984-07-18.00.59.pdf>

<https://bigpub.com/1984-07-18.13.30.pdf>

<https://bigpub.com/1984-07-18.23.59.pdf>

Adding hours and minutes provides gives 1,440 labels per day. One way in which even a small publisher might use such large numbers is to use low-precision inception dates (e.g. days) for full documents, and higher-precision times (e.g. hours) within those same dates to label components such as figures and titles within that document. As mentioned earlier, another possible use is web-accessible logging of data, which may require seconds or arbitrarily fine decimal fractions of seconds for each document.

While the Kenobi versioning system addresses many of the same issues as the decades-older Digital Object Identifiers (DOI) [1] and arXiv identifier [2] efforts, Kenobi versioning is a much less audacious effort whose goal is not to enforce global standards, but to make it easier for publishers — especially small publishers — to create succinct naming conventions that match their own needs, yet still provide enough structure and commonality for other users to understand intuitively. Kenobi also differs in its emphasis that even the most stable are unchanging documents should nonetheless be viewed as *living* entities, which in turn means that the canonical name of any document should refer by default to its most recent version, just as is done in software application versioning.

This perspective is subtly different from versioning, which tends even by its very name to treat the first version as canonical and all subsequent entities as “versions” of that document. Kenobi flips this model upside down and interprets the *current* document as always being canonical, with all earlier snapshots of it as now “obsolete” images of what the living document once looked like in a past that no longer exists.

However, Kenobi versioning does strongly agree with and even expands upon the idea that when it comes to *naming* the document, the earliest points at which the document can be said to exist meaningfully, even if only as new concept, should be treated as the inception event for creating an identifier that can then be unique for all of time. The concept of an inception date, and its use as the primary identifier of the document, is designed to capture exactly that idea: When did the central concept or key data contained within the document first arise in history, and how can that event be used to create a permanent name?

Pragmatically, Kenobi versioning is simply an easy and convenient way for publishers of many sizes to devise their own custom web-based naming conventions that are best suited for their own situations, easy to understand, and compact to write. This is the purpose of any good standard: Not to constrain, but to give *just enough* order and structure to allow its users to communicate easily and unambiguously with each other.

[1] P. Attanasio, "The use of DOI in eContent value chain," *Multilingual European DOI Registration Agency (mEDRA)*, 2004.

[2] S. Warner, "Open Archives Initiative protocol development and implementation at arXiv," *arXiv preprint cs/0101027*, 23 1 2001.