

Charts WG Report to UTC #187

April 20, 2026

Liang Hai, UTC Charts Working Group

Participants: Asmus Freytag, Jan Kučera, Ken Whistler, Liang Hai (vice-chair), Michel Suignard (chair), Peter Constable.

Meeting dates since the last report: January 30, February 13, February 28, March 13, March 27.

Table of contents:

1. Version 18.0
 - 1.1 Availability of “unversioned” charts
 - 1.2 Auxiliary charts
2. Ownership of the names list
3. Public feedback
 - 3.1 PRI #536: Unicode 18.0 Alpha Review
 - 3.2 PRI #540: Other Feedback for UTC #187

1. Version 18.0 plan

Starting from 18.0 beta, the PDF “owner password” protection (also known as the “permissions password”) will be removed from the code charts. This is in sync with the Editorial WG’s plan (see C3 in [L2/26-097](#)) to remove the password protection from the core spec’s archival PDF.

1.1 Availability of “unversioned” charts

In order to enable practical and reliable per-version referencing to the code charts, we propose that for Unicode Version 18.0:

1. The charts linked from <https://unicode.org/charts/> (known internally as the “unversioned” charts) should be published per version next to (and thus permanently archived together with) the consolidated “archival” charts CodeCharts.pdf. For example, instead of the current location <https://unicode.org/charts/PDF/U0000.pdf> (which gets overridden for each Unicode

version), U0000.pdf will be published at

<https://unicode.org/Public/18.0.0/charts/U0000.pdf> (next to CodeCharts.pdf under the same directory).

- a. Revise the query results of <https://unicode.org/cgi-bin/Code2Chart> (normally queried from the “Find chart by hex code” input on <https://unicode.org/charts/>) to point to the new locations.
 - b. Configure redirection from the old to the new locations for backward compatibility.
2. The charts linked from <https://unicode.org/charts/> should not be allowed to change between Unicode versions anymore.
 - a. This allows <https://unicode.org/charts/> to point to the per-version locations under <https://unicode.org/Public/>.
 3. Update the core spec and additional documentation (eg, <https://unicode.org/charts/About.html>) to reflect the changes.
 4. Retrospectively archive the 17.0 “unversioned” charts under <https://unicode.org/Public/17.0.0/charts/>, following this new pattern.

In order to minimize confusion between the three types of charts, we recommend the following terminology changes across public-facing and internal documentation (additional attributes in parentheses for further clarification):

- versioned → (versioned, per block) delta charts (that only exist for blocks with highlighted changes)
- unversioned → (versioned, per block) charts
- archival → (versioned) consolidated charts (for archival purposes)

A separate project can be planned (not bound for 18.0) to expand the retrospective archiving of pre-17.0 “unversioned” charts. We have already located internal archives of earlier “unversioned” charts for every version up to 5.0, except 12.1.

1.2 Auxiliary charts

So far, the five sets of what’s known internally as the “auxiliary charts” (introduced on <https://unicode.org/charts/About.html> as “other charts”) have been generated by tooling in the [unicodetools](#) repo. We have been working on the modernization of these charts in the private “auxiliary-charts” repo.

Ken has been working on the following two:

- Case Mapping Charts: <https://unicode.org/charts/case/>

- Collation Charts: [.../collation/](#)

Liang has been working on the following one:

- Names List Charts: [.../nameslist/](#)

The remaining two are of little value and will be removed:

- Script Charts: [.../script/](#)
- Normalization Charts: [.../normalization/](#)

2. Ownership of the names list

We accept the ownership of the names list, transferred from the Editorial WG (see C4 in [L2/26-097](#)). The names list is now maintained in the private “charts” repo, including the tooling (nomenclator) and the source file (nomenclator/data/NLAnnotations.txt).

The output file is also source controlled at a fixed location (nomenclator/output/NamesList.txt), which allows the Editorial WG to review the changes, as well as PAG to pick it up and update the UCD.

3. Public feedback

3.1 PRI #536: Unicode 18.0 Alpha Review

Date/Time: Tue Feb 10 09:38:21 PT 2026

ReportID: [ID20260210093821](#)

Name: Joel Rusch

Report Type: Public Review Issue

Opt Subject: PRI 536: U+1024 (၅၅) falsely appears in Musical Symbols Sup.

Hello!

In all Code Charts displaying the Musical Symbols Supplement block (1D250..1D281), the explanatory bullet for MUSICAL SYMBOL COMBINING FLAG-8 (1D252) reads as "creates 1024 ၅၅ th notes".

The ၅၅ (MYANMAR LETTER II at U+1024) presumably slipped in accidentally.


Comments: Fixed. The change will be visible in beta.

Date/Time: Tue Feb 10 16:18:17 PT 2026
ReportID: [ID20260210193501](#) (Duplicate ID)
Name: Charlotte Buff
Report Type: Public Review Issue
Opt Subject: PRI 536: Incorrect glyphs for two triangles

The reference glyphs for U+1F7FD LOWER LEFT FLATTENED RIGHT TRIANGLE and U+1F7FE LOWER RIGHT FLATTENED RIGHT TRIANGLE are switched around (cf. [186-C5](#)).

Comments: Fixed. The change will be visible in beta.

Date/Time: Tue Feb 10 19:35:01 PT 2026
ReportID: [ID20260210193501](#) (Duplicate ID)
Name: Bryndan Meyerholt
Report Type: Public Review Issue
Opt Subject: PRI 536

Issue #1: For U+1D252, remove the  character from the text in the bulleted point list as it should not be there.

Issue #2: For Chisoi, U+16D98 should be in a subheading called Sign or Signs as it does not appear to be a full letter.

Not really a big issue, but worth mentioning: U+1D1F7 could have an annotation pointing to U+A75C as it looks similar to it.

Comments: Fixed. The change will be visible in beta.

Date/Time: Wed Feb 11 15:51:37 PT 2026
ReportID: [ID20260211155137](#)
Name: Philippe Verdy
Report Type: Public Review Issue
Opt Subject: 536 - U18.0 alpha charts: 6 new blocks, not 7

[Editorial suggestion] The presentation page for Unicode 18.0 delta charts (<https://www.unicode.org/charts/PDF/Unicode-18.0/>) is misleading:

I don't understand why Miscellaneous Symbols Supplement, which adds 19 characters, is presented in yellow background, given it is an already existing block in Unicode 17.0. There should then be 6 blocks in yellow background, not 7.

As well, the listed Armenian block should be marked with an asterisk(like CJK Unified Ideographs Extension D*), with all its representative glyphs updated to non-italicized forms for modern use especially on screen or public displays (the previous chart was in traditional handwritten style), in addition to the 3 additional small modifier letters. (This is according to the description "Blocks which also have significant glyph updates, as well as the character additions, are starred.") This suggests that Armenian fonts can legitimately use roman/italic style distinctions, without using distinct character encodings, and that the roman style should become the default.

Comments: Fixed. The change is already live on the page.

Date/Time: Wed Feb 18 06:46:14 PT 2026

ReportID: [ID20260218064614](#)

Name: Philippe Verdy

Report Type: Public Review Issue

Opt Subject: 536 (U18.0a): 1DB00–1DBFF line-height in list

(Editorial only)

<https://www.unicode.org/charts/PDF/Unicode-18.0/U180-1DB00.pdf>

The list of characters at bottom of the chart shows Leibizian symbols with truncated bottom parts (they are not truncated in the chart itself).

Leibnizian operators		
1DB00	⌌	LEIBNIZIAN EQUALS SIGN <i>insufficient line-height</i>
1DB01	⌍	LEIBNIZIAN EQUALS SIGN WITH DOUBLE VERTICALS
1DB02	⌎	LEIBNIZIAN EQUALS SIGN WITH SMALL S
1DB03	⌏	LEIBNIZIAN GREATER-THAN
1DB04	⌐	LEIBNIZIAN LESS-THAN
1DB05	⌑	LEIBNIZIAN GREATER-THAN WITH SMALL P
1DB06	⌒	LEIBNIZIAN LESS-THAN WITH SMALL P
1DB07	⌓	LEIBNIZIAN GREATER-THAN OR LESS-THAN
1DB08	⌔	INVERTED SQUARE LEFT OPEN BOX OPERATOR
1DB09	⌕	INVERTED SQUARE RIGHT OPEN BOX OPERATOR
1DB0A	⌖	TWO-LINE GREATER-THAN
1DB0B	⌗	TWO-LINE LESS-THAN
1DB0C	⌘	COMMENSURABILITY
1DB0D	⌙	INCOMMENSURABILITY
1DB0E	⌚	COMMENSURABILITY IN SQUARE
1DB0F	⌛	INCOMMENSURABILITY IN SQUARE
1DB10	⌜	CARTESIAN EQUALS SIGN ~ 1DB10 FE00 ⌜ with descender
1DB11	⌝	LEIBNIZIAN CONGRUENCE
1DB12	⌞	LEIBNIZIAN CONGRUENCE WITH VERTICAL BAR
1DB13	⌟	LEIBNIZIAN CONGRUENCE-2
1DB14	⌠	LEIBNIZIAN CONGRUENCE-2 INVERTED
1DB15	⌡	LEIBNIZIAN CONGRUENCE-2 WITH HORIZONTAL BAR
1DB16	⌢	LEIBNIZIAN CONGRUENCE-2 WITH HORIZONTAL AND VERTICAL BAR
1DB17	⌣	LEIBNIZIAN COINCIDENCE
1DB18	⌤	INVERTED LAZY S OVER LAZY S
1DB19	⌥	LEIBNIZIAN SIMILARITY
1DB1A	⌦	LEIBNIZIAN SIMILARITY-2

This list should use an increased line-height to avoid the problem (suggest 1.4em minimum, possibly 1.6em, not the usual ~1.25em suitable only for Basic Latin or Latin-1). This may be caused by the metrics of the temporary font used to generate this draft.

Comments: Fixed. The change will be visible in beta.

Date/Time: Wed Feb 18 19:43:28 PT 2026

ReportID: [ID20260218194328](#)

Name: Evie Undis

Report Type: Public Review Issue

Opt Subject: Error in Musical Symbols Supplement delta charts

The entry for u+1d252 in <https://www.unicode.org/charts/PDF/Unicode-18.0/U180-1D250.pdf> has a note containing a u+1024 MYANMAR LETTER II, I guess because of the mention of 1024th notes

Comments: Fixed. The change will be visible in beta.

Date/Time: Wed Feb 18 22:00:59 PT 2026

ReportID: [ID20260218220059](#)

Name: Kirk Miller

Report Type: Public Review Issue

Opt Subject: PRI 536 - typo

In the annotation,

1D252 MUSICAL SYMBOL COMBINING FLAG-8

- creates 1024 ၵ th notes

there's an extraneous Burmese letter. Nothing was overwritten; it should just be:

- creates 1024th notes

Comments: Fixed. The change will be visible in beta.

Date/Time: Wed Mar 18 10:26:29 PT 2026

ReportID: [ID20260318102629](#)

Name: Karl Pentzlin

Report Type: Public Review Issue

Opt Subject: Unicode 18 Alpha Review: U+029A and U+A790

As the two letters:

029A LATIN SMALL LETTER CLOSED OPEN E

A79D LATIN SMALL LETTER VOLAPUK OE

are looking almost identical, I suggest to cross reference them in the code charts by annotations of the form:

029A LATIN SMALL LETTER CLOSED OPEN E

→ A79D latin small letter volapuk oe

A79D LATIN SMALL LETTER VOLAPUK OE

→ 029A latin small letter closed open e

Recommendations:

- **Action Item** for Ken Whistler, CHARTS: Add the suggested cross references to NamesList.txt, for Unicode Version 18.0. See PRI #536 feedback ID20260318102629.

Date/Time: Sun Mar 22 16:20:43 PT 2026

ReportID: [ID20260322162043](#)

Name: Charlotte Buff

Report Type: Public Review Issue

Opt Subject: PRI 536: Swapped glyphs for two Leibnizian symbols

The reference glyphs for U+1CEF1 LEIBNIZIAN DIVISION SIGN and U+1CEF2 LEIBNIZIAN MULTIPLICATION SIGN are switched around (cf. L2/25-062)

Comments: Fixed. The change will be visible in beta.

3.2 PRI #540: Other Feedback for UTC #187

Date/Time: Thu Mar 05 09:04:42 PT 2026

ReportID: [ID20260305090442](#)

Name: Alfie Davies

Report Type: Report Error in Publication/Data

Opt Subject: Incorrect details for two symbols

At <https://www.unicode.org/charts/PDF/U2980.pdf#page=5>, there are pronunciation details given for the unicode symbols '+' (TINY 29FE) and '-' (MINY 29FF):

it is stated that TINY is pronounced "teenie" and MINY is pronounced "meenie". This is not correct. The canonical reference is Winning Ways for you Mathematical Plays, by Berlekamp, Conway, and Guy. On page 125 in Volume 1 of the second edition, you will see that it says TINY should be pronounced "tiny". Similarly, on page 126, it specifies explicitly that MINY should be pronounced "miny".

In case it is relevant: I am a researcher in Combinatorial Game Theory. I'm somewhat curious to know where the "teenie" and "meenie" pronunciations came from initially here, but I don't know if you've retained that information.

Thanks for all of your work in maintaining this!

Comments: The pronunciation notes have been removed. The change will be visible in beta.