

Eleven faces, one page

Every line below is set in a face of its own, embedded and subset to what it draws. The document is PDF/A-3u, so none of them may be left out.

Latin, Greek and Cyrillic - Noto Sans

Grüße aus Bochum - Ελλάδα - Москва - Łódź - Plzeň

Japanese - Noto Sans JP

日本語のテキスト ひらがな カタカナ 漢字 東京 一 二 三 四 五

Tibetan - the thirty letters; the stacked syllables need GSUB substitution and are refused - Noto Serif Tibetan

ཀུལ་གྲངས་ཆེན་ཏེ་ཐད་ན་པ་ཕ་བམ་ཙེ་ཆེ་མེད་ཞུ་བ་ལ་པ་ར་ལ་ཤེས་ཏེ་ཨ།

Symbols - Noto Sans Symbols

♀ ‡ ☾ ☶ ☯ ☸ ☺ ☾ ♀ ♀ ♂ 𐤃 𐤅 𐤆 𐤇 𐤈 𐤉 𐤊 𐤋 𐤌 𐤍 𐤎 𐤏 𐤐 𐤑 𐤒 𐤓 𐤔 𐤕 𐤖 𐤗 𐤘 𐤙 𐤚 𐤛 𐤜 𐤝 𐤞 𐤟 𐤠 𐤡 𐤢 𐤣 𐤤 𐤥 𐤦 𐤧 𐤨 𐤩 𐤪 𐤫 𐤬 𐤭 𐤮 𐤯 𐤰 𐤱 𐤲 𐤳 𐤴 𐤵 𐤶 𐤷 𐤸 𐤹 𐤺 𐤻 𐤼 𐤽 𐤾 𐤿 𐥀 𐥁 𐥂 𐥃 𐥄 𐥅 𐥆 𐥇 𐥈 𐥉 𐥊 𐥋 𐥌 𐥍 𐥎 𐥏 𐥐 𐥑 𐥒 𐥓 𐥔 𐥕 𐥖 𐥗 𐥘 𐥙 𐥚 𐥛 𐥜 𐥝 𐥞 𐥟 𐥠 𐥡 𐥢 𐥣 𐥤 𐥥 𐥦 𐥧 𐥨 𐥩 𐥪 𐥫 𐥬 𐥭 𐥮 𐥯 𐥰 𐥱 𐥲 𐥳 𐥴 𐥵 𐥶 𐥷 𐥸 𐥹 𐥺 𐥻 𐥼 𐥽 𐥾 𐥿 𐏀 𐏁 𐏂 𐏃 𐏄 𐏅 𐏆 𐏇 𐏈 𐏉 𐏊 𐏋 𐏌 𐏍 𐏎 𐏏 𐏐 𐏑 𐏒 𐏓 𐏔 𐏕 𐏖 𐏗 𐏘 𐏙 𐏚 𐏛 𐏜 𐏝 𐏞 𐏟 𐏠 𐏡 𐏢 𐏣 𐏤 𐏥 𐏦 𐏧 𐏨 𐏩 𐏪 𐏫 𐏬 𐏭 𐏮 𐏯 𐏰 𐏱 𐏲 𐏳 𐏴 𐏵 𐏶 𐏷 𐏸 𐏹 𐏺 𐏻 𐏼 𐏽 𐏾 𐏿 𐐀 𐐁 𐐂 𐐃 𐐄 𐐅 𐐆 𐐇 𐐈 𐐉 𐐊 𐐋 𐐌 𐐍 𐐎 𐐏 𐐐 𐐑 𐐒 𐐓 𐐔 𐐕 𐐖 𐐗 𐐘 𐐙 𐐚 𐐛 𐐜 𐐝 𐐞 𐐟 𐐠 𐐡 𐐢 𐐣 𐐤 𐐥 𐐦 𐐧 𐐨 𐐩 𐐪 𐐫 𐐬 𐐭 𐐮 𐐯 𐐰 𐐱 𐐲 𐐳 𐐴 𐐵 𐐶 𐐷 𐐸 𐐹 𐐺 𐐻 𐐼 𐐽 𐐾 𐐿 𐑀 𐑁 𐑂 𐑃 𐑄 𐑅 𐑆 𐑇 𐑈 𐑉 𐑊 𐑋 𐑌 𐑍 𐑎 𐑏 𐑐 𐑑 𐑒 𐑓 𐑔 𐑕 𐑖 𐑗 𐑘 𐑙 𐑚 𐑛 𐑜 𐑝 𐑞 𐑟 𐑠 𐑡 𐑢 𐑣 𐑤 𐑥 𐑦 𐑧 𐑨 𐑩 𐑪 𐑫 𐑬 𐑭 𐑮 𐑯 𐑰 𐑱 𐑲 𐑳 𐑴 𐑵 𐑶 𐑷 𐑸 𐑹 𐑺 𐑻 𐑼 𐑽 𐑾 𐑿 𐒀 𐒁 𐒂 𐒃 𐒄 𐒅 𐒆 𐒇 𐒈 𐒉 𐒊 𐒋 𐒌 𐒍 𐒎 𐒏 𐒐 𐒑 𐒒 𐒓 𐒔 𐒕 𐒖 𐒗 𐒘 𐒙 𐒚 𐒛 𐒜 𐒝 𐒞 𐒟 𐒠 𐒡 𐒢 𐒣 𐒤 𐒥 𐒦 𐒧 𐒨 𐒩 𐒪 𐒫 𐒬 𐒭 𐒮 𐒯 𐒰 𐒱 𐒲 𐒳 𐒴 𐒵 𐒶 𐒷 𐒸 𐒹 𐒺 𐒻 𐒼 𐒽 𐒾 𐒿 𐓀 𐓁 𐓂 𐓃 𐓄 𐓅 𐓆 𐓇 𐓈 𐓉 𐓊 𐓋 𐓌 𐓍 𐓎 𐓏 𐓐 𐓑 𐓒 𐓓 𐓔 𐓕 𐓖 𐓗 𐓘 𐓙 𐓚 𐓛 𐓜 𐓝 𐓞 𐓟 𐓠 𐓡 𐓢 𐓣 𐓤 𐓥 𐓦 𐓧 𐓨 𐓩 𐓪 𐓫 𐓬 𐓭 𐓮 𐓯 𐓰 𐓱 𐓲 𐓳 𐓴 𐓵 𐓶 𐓷 𐓸 𐓹 𐓺 𐓻 𐓼 𐓽 𐓾 𐓿 𐔀 𐔁 𐔂 𐔃 𐔄 𐔅 𐔆 𐔇 𐔈 𐔉 𐔊 𐔋 𐔌 𐔍 𐔎 𐔏 𐔐 𐔑 𐔒 𐔓 𐔔 𐔕 𐔖 𐔗 𐔘 𐔙 𐔚 𐔛 𐔜 𐔝 𐔞 𐔟 𐔠 𐔡 𐔢 𐔣 𐔤 𐔥 𐔦 𐔧 𐔨 𐔩 𐔪 𐔫 𐔬 𐔭 𐔮 𐔯 𐔰 𐔱 𐔲 𐔳 𐔴 𐔵 𐔶 𐔷 𐔸 𐔹 𐔺 𐔻 𐔼 𐔽 𐔾 𐔿 𐕀 𐕁 𐕂 𐕃 𐕄 𐕅 𐕆 𐕇 𐕈 𐕉 𐕊 𐕋 𐕌 𐕍 𐕎 𐕏 𐕐 𐕑 𐕒 𐕓 𐕔 𐕕 𐕖 𐕗 𐕘 𐕙 𐕚 𐕛 𐕜 𐕝 𐕞 𐕟 𐕠 𐕡 𐕢 𐕣 𐕤 𐕥 𐕦 𐕧 𐕨 𐕩 𐕪 𐕫 𐕬 𐕭 𐕮 𐕯 𐕰 𐕱 𐕲 𐕳 𐕴 𐕵 𐕶 𐕷 𐕸 𐕹 𐕺 𐕻 𐕼 𐕽 𐕾 𐕿 𐖀 𐖁 𐖂 𐖃 𐖄 𐖅 𐖆 𐖇 𐖈 𐖉 𐖊 𐖋 𐖌 𐖍 𐖎 𐖏 𐖐 𐖑 𐖒 𐖓 𐖔 𐖕 𐖖 𐖗 𐖘 𐖙 𐖚 𐖛 𐖜 𐖝 𐖞 𐖟 𐖠 𐖡 𐖢 𐖣 𐖤 𐖥 𐖦 𐖧 𐖨 𐖩 𐖪 𐖫 𐖬 𐖭 𐖮 𐖯 𐖰 𐖱 𐖲 𐖳 𐖴 𐖵 𐖶 𐖷 𐖸 𐖹 𐖺 𐖻 𐖼 𐖽 𐖾 𐖿 𐗀 𐗁 𐗂 𐗃 𐗄 𐗅 𐗆 𐗇 𐗈 𐗉 𐗊 𐗋 𐗌 𐗍 𐗎 𐗏 𐗐 𐗑 𐗒 𐗓 𐗔 𐗕 𐗖 𐗗 𐗘 𐗙 𐗚 𐗛 𐗜 𐗝 𐗞 𐗟 𐗠 𐗡 𐗢 𐗣 𐗤 𐗥 𐗦 𐗧 𐗨 𐗩 𐗪 𐗫 𐗬 𐗭 𐗮 𐗯 𐗰 𐗱 𐗲 𐗳 𐗴 𐗵 𐗶 𐗷 𐗸 𐗹 𐗺 𐗻 𐗼 𐗽 𐗾 𐗿 𐘀 𐘁 𐘂 𐘃 𐘄 𐘅 𐘆 𐘇 𐘈 𐘉 𐘊 𐘋 𐘌 𐘍 𐘎 𐘏 𐘐 𐘑 𐘒 𐘓 𐘔 𐘕 𐘖 𐘗 𐘘 𐘙 𐘚 𐘛 𐘜 𐘝 𐘞 𐘟 𐘠 𐘡 𐘢 𐘣 𐘤 𐘥 𐘦 𐘧 𐘨 𐘩 𐘪 𐘫 𐘬 𐘭 𐘮 𐘯 𐘰 𐘱 𐘲 𐘳 𐘴 𐘵 𐘶 𐘷 𐘸 𐘹 𐘺 𐘻 𐘼 𐘽 𐘾 𐘿 𐙀 𐙁 𐙂 𐙃 𐙄 𐙅 𐙆 𐙇 𐙈 𐙉 𐙊 𐙋 𐙌 𐙍 𐙎 𐙏 𐙐 𐙑 𐙒 𐙓 𐙔 𐙕 𐙖 𐙗 𐙘 𐙙 𐙚 𐙛 𐙜 𐙝 𐙞 𐙟 𐙠 𐙡 𐙢 𐙣 𐙤 𐙥 𐙦 𐙧 𐙨 𐙩 𐙪 𐙫 𐙬 𐙭 𐙮 𐙯 𐙰 𐙱

More symbols - Noto Sans Symbols 2

✂ ✂ ✈ ✎ ✓ ✕ ♣ ★ ❄ ♥ ➡ ➡ ☆ ○ □ □ □ □ □ □ ♔ ♚ ♖ ♗ ♘ ♙

Emoji, monochrome - Noto Emoji

Cuneiform - Sumerian logograms - Noto Sans Cuneiform

米 金 豐 田 公 司 豐 田 一 人

Egyptian hieroglyphs - Noto Sans Egyptian Hieroglyphs

Hebrew - see the note below - DejaVu Sans

שָׁלוֹם עוֹלָם בְּרוּכִים הַבָּאִים

Arabic - see the note below - Noto Naskh Arabic

العربية مرحبا بالعالم

A brush face - Permanent Marker

HANDWRITTEN, MORE OR LESS - 0123456789, 42 %, 17.08.2026, NO. 4711

Where this package stops

Cuneiform and hieroglyphs come out right because they ask for nothing beyond a glyph per character, left to right. The Hebrew line asks for one thing more - that the line run the other way. The Arabic line asks for two: the order and the contextual forms, and the second depends on the face.

Right to left, and what stays put

The same words in DejaVu Sans, set with -direction rtl and nothing else, an invoice line and a line of amounts under them:

العربية مرحبا بالعالم
الفاتورة 4711 - € 1.234,50 (%19)
الحرارة -17,5° - الخصم 3% - المبلغ 1.234,50£

Measured, not asserted. The shapes come out of the init, medi and fina features of GSUB, and the glyphs are the ones HarfBuzz produces for the same words - checked glyph by glyph against hb-shape. In the invoice line the digits run left to right inside the right-to-left line, as Unicode says they must, and "(" is drawn with the glyph of ")"; a line that MIXES the two directions is refused instead: deciding where such a run goes is the bidi algorithm, and this package has none. The chaining lookups are no longer missing either - see the block below - and neither are the vowel signs: nikud and harakat are combining marks, and marks are placed from the anchors of the face. What stays refused needs something an anchor cannot give: the Tibetan stacks, the Indic conjuncts, Thai.

Lam-alef, and the lookups that reach it

Noto Naskh Arabic	DejaVu Sans	what the face does with it lam + alef: a chaining lookup in the first face, an ordinary ligature in the second
لا	لا	
العربية	العربية	one medial skeleton widened before the final - a chaining rule again
لا	لا	lam + alef-madda: one glyph in DejaVu Sans, out of "liga" under the "arab" script - reached since the cursive shaping resolves it
the same two words with -ligatures 0		لا
		لا
		lam + alef-madda without the typographic ligature: two joined letters, which is what the face draws when nobody asks for the pair
		lam + alef is REQUIRED and stands: -ligatures says nothing about the shaping of a script

Checked against HarfBuzz rather than by eye: over 7961 Arabic words and every face in this tree that has positional forms, the glyphs tclpdf produces are the glyphs hb-shape produces with nothing switched off - 0 differ, where 66 differed before "liga" was read under the script of the text, and 1552 before the chaining lookups were read at all.

The everyday, right to left

thank you very much	תודה רבה
invoice number 4711	חשבונית מספר 4711
total 1,234.50 euro	סך הכל € 1.234,50
date: 17 August 2026	תאריך: 17.08.2026
(including 17 % tax)	(כולל מס 17%)
with kind regards	בברכה
thank you for your trust	שכרא לثقتكم
invoice number 2026-114	الفاتورة رقم 114-2026
due date 30 September 2026	تاريخ الاستحقاق 30.09.2026
please pay within 30 days	الرجاء الدفع خلال 30 يوما
address: 12 Nile Street, Cairo	العنوان: شارع النيل 12، القاهرة

The same in a table - the description column right to left, the amount column left to right, said once as a style:

المبلغ	الوصف
18.400,00	طباعة 12.500 علية
3.180,00	ورنيش وتقطيع
21.580,00	المجموع

The planes above, right to left

Arabic mathematical letters (U+1EE00 block, in DejaVu Sans) - the one supplementary-plane right-to-left block a face of these pages carries;
 Phoenician or Kharoshthi would need a face of their own:

$$س = ب + د$$

Music needs more than a font

Noto Music has every piece: a five-line staff (U+1D11A), clefs, noteheads, rests, a combining stem. Setting them as TEXT does not give a score, though - measured, all three ways fail. Staff segments in a row leave gaps between them; a clef after a staff segment stands NEXT to it, because every character carries its own advance and sits on the baseline; and the combining stem lands to the right of the notehead rather than on it, for the same reason the Arabic line above comes out wrong. That is why the music face has no line of its own in the list.

What does work is the other way round, and below it is carried through: the first eight bars of Beethoven's piano sonata op. 2 no. 1, right hand, set by hand. Whatever is a glyph - clef, key, time, heads, dots, accidentals, rests, staccato, fermata, arpeggio, dynamics - is Noto Music; whatever is a stroke - staff and ledger lines, stems, bar lines, beams, slurs, the hairpin - is tclpdf graphics, because no font can deliver those: Unicode holds only begin/end signals for an engraving engine there (U+1D173 to U+1D17A). Every position is a number in a table in this script. There is no engraving engine behind it and none is planned: this is a picture of these eight bars, not a tool for the ninth.



Glyphs: Noto Music - lines, stems, beams, slurs and the hairpin drawn; every position by hand.

The one that does not work

Noto Color Emoji is not on this page, and not by oversight. Its glyphs carry no outlines: the picture is a stack of COLR layers over a palette, and subsetting keeps neither. So [font embed] refuses the face by name - TCLPDF FONT OUTLINES - rather than writing 25 MB that come out empty. The monochrome Noto Emoji above is the face that draws this way, and [colorFont] in 02.14, 02.17 and 02.18 is the road for the colour one.

What a face costs in the document

The file size is read off the font, the glyph count out of the document. A face is only ever as big as what it draws - which is what makes 13 of them on one page reasonable at all.

Face	File on disk	Glyphs in the file
Latin, Greek and Cyrillic	1.9 MB	4503
Japanese	5.2 MB	17103
Tibetan - the thirty letters; the stacked syllables need GSUB substitution and are refused	2.0 MB	2226
Symbols	0.4 MB	1110
More symbols	1.2 MB	2976
Emoji, monochrome	1.9 MB	1905
Cuneiform - Sumerian logograms	1.4 MB	1573
Egyptian hieroglyphs	1.0 MB	1406
Hebrew - see the note below	0.7 MB	6253
Arabic - see the note below	0.3 MB	1712
A brush face	0.1 MB	230
Music notation	0.2 MB	913
Latin, bold instance of the same file	1.9 MB	4503