

The `xepersian-hm` package Fixing kashida in xepersian Source code documentation

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1 `xepersian-hm` Implementation

1.1 File: `xepersian-hm.sty`

```
1 <*xepersian-hm-sty>
2 \NeedsTeXFormat{LaTeX2e}
3 \RequirePackage{expl3}[2020-03-06]
4 \@ifpackagelater{expl3}{2020-03-06}
5 {}
6 {%
7   \PackageError{xepersian-hm}{Support package l3kernel too old}
8   {%
9     Please install an up to date version of l3kernel\MessageBreak
10    using your TeX package manager or from CTAN.\MessageBreak
11    \MessageBreak
12    Loading xtemplate will abort!%
13  }%
14  \endinput
15 }
16 \RequirePackage{l3keys2e}
17 \RequirePackage{graphicx}[2019-11-30]
18 \RequirePackage{zref-savepos}[2020-03-03]
19 \RequirePackage{xepersian}
20 \ExplSyntaxOn
21 \ProvidesExplPackage {xepersian-hm} {2020-05-12} {0.5e} { Fixes~issues~in~xepersian~package }
22
23 \int_const:Nn \c_xephm_ksh_int {"0640} % kashida
24 \int_const:Nn \c_xephm_lrm_int {"200E} % left-right-mark
25 \int_const:Nn \c_xephm_zwj_int {"200D} % zero-width joiner
26
27 \int_const:Nn \c_xephm_two_int {2} % 2
```

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28 \int_const:Nn \c_xephm_four_int {4} % 4
29
30 \tl_const:Nn \c_xephm_skip_a_tl { 0 em plus 0.5 em }
31 \tl_const:Nn \c_xephm_skip_b_tl { 0.14 em plus 5.5 em }
32
33 \int_new:N \l_xephm_counter_int
34
35 \int_new:N \l_xephm_kashida_slot_int
36
37 \int_new:N \l_xephm_line_break_penalty_int
38
39 \int_new:N \l_xephm_min_penalty_int
40 \int_new:N \l_xephm_low_penalty_int
41 \int_new:N \l_xephm_med_penalty_int
42 \int_new:N \l_xephm_high_penalty_int
43 \int_new:N \l_xephm_max_penalty_int
44
45 \tl_new:N \l_xephm_line_break_tl
46
47 \tl_new:N \l_xephm_main_font_full_tl
48 \tl_new:N \l_xephm_main_font_name_tl
49
50 \tl_new:N \l_xephm_skip_default_tl
51
52 \tl_new:N \l_xephm_active_ligs_tl
53
54 \tl_new:N \l_xephm_gap_filler_tl
55
56 \dim_new:N \l_xephm_diff_pos_dim
57
58 \bool_set_false:N \l_xephm_kashida_hm_fix_bool
59 \bool_set_false:N \l_xephm_ligature_bool
60 \bool_set_false:N \l_xephm_linebreakpenalty_bool
61
62 \int_set:Nn \l_xephm_min_penalty_int { 0 }
63 \int_set:Nn \l_xephm_low_penalty_int { 8 }
64 \int_set:Nn \l_xephm_med_penalty_int { 15 }
65 \int_set:Nn \l_xephm_high_penalty_int { 25 }
66 \int_set:Nn \l_xephm_max_penalty_int { 10000 }
67
68 \tl_set:Nn \l_xephm_stretch_glyph_tl { glyph }
69 \tl_set:Nn \l_xephm_stretch_hruler_tl { hruler }
70
71 \tl_set:Nn \l_xephm_fnt_kayhan_tl { kayhan }
72 \tl_set:Nn \l_xephm_fnt_kayhannavaar_tl { kayhannavaar }
73 \tl_set:Nn \l_xephm_fnt_kayhanpook_tl { kayhanpook }
74 \tl_set:Nn \l_xephm_fnt_kayhansayeh_tl { kayhansayeh }
75 \tl_set:Nn \l_xephm_fnt_khoramshahr_tl { khoramshahr }
76 \tl_set:Nn \l_xephm_fnt_khorramshahr_tl { khorramshahr }
77 \tl_set:Nn \l_xephm_fnt_niloofar_tl { niloofar }

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78 \tl_set:Nn \l_xephm_fnt_paatch_tl { paatch }
79 \tl_set:Nn \l_xephm_fnt_riyaz_tl { riyaz }
80 \tl_set:Nn \l_xephm_fnt_roya_tl { roya }
81 \tl_set:Nn \l_xephm_fnt_shafigh_tl { shafigh }
82 \tl_set:Nn \l_xephm_fnt_shafighKurd_tl { shafighKurd }
83 \tl_set:Nn \l_xephm_fnt_shafighUzbek_tl { shafighUzbek }
84 \tl_set:Nn \l_xephm_fnt_shiraz_tl { shiraz }
85 \tl_set:Nn \l_xephm_fnt_sols_tl { sols }
86 \tl_set:Nn \l_xephm_fnt_tabriz_tl { tabriz }
87 \tl_set:Nn \l_xephm_fnt_titr_tl { titr }
88 \tl_set:Nn \l_xephm_fnt_titre_tl { titre }
89 \tl_set:Nn \l_xephm_fnt_traffic_tl { traffic }
90 \tl_set:Nn \l_xephm_fnt_vahid_tl { vahid }
91 \tl_set:Nn \l_xephm_fnt_vosta_tl { vosta }
92 \tl_set:Nn \l_xephm_fnt_yaghut_tl { yaghut }
93 \tl_set:Nn \l_xephm_fnt_yagut_tl { yagut }
94 \tl_set:Nn \l_xephm_fnt_yas_tl { yas }
95 \tl_set:Nn \l_xephm_fnt_yekan_tl { yekan }
96 \tl_set:Nn \l_xephm_fnt_yermook_tl { yermook }
97 \tl_set:Nn \l_xephm_fnt_zar_tl { zar }
98 \tl_set:Nn \l_xephm_fnt_ziba_tl { ziba }
99 \tl_set:Nn \l_xephm_fnt_default_tl { default }
100 \tl_set:Nn \l_xephm_fnt_noskip_tl { noskip }
101
102 \tl_set:Nn \l_xephm_lig_aalt_tl { aalt } % Access All Alternatives
103 \tl_set:Nn \l_xephm_lig_ccmp_tl { ccmp } % Glyph Composition/Decomposition
104 \tl_set:Nn \l_xephm_lig_dlig_tl { dlig } % Discretionary Ligatures
105 \tl_set:Nn \l_xephm_lig_fina_tl { fina } % Final (Terminal) Forms
106 \tl_set:Nn \l_xephm_lig_init_tl { init } % Initial Forms
107 \tl_set:Nn \l_xephm_lig_locl_tl { locl } % Localized Forms
108 \tl_set:Nn \l_xephm_lig_medi_tl { medi } % Medial Forms
109 \tl_set:Nn \l_xephm_lig_rlig_tl { rlig } % Required Ligatures
110 \tl_set:Nn \l_xephm_lig_default_tl { default }
111
112 \clist_set:Nn \l_xephm_lig_aalt_clist { { } } % Access All Alternatives
113 \clist_set:Nn \l_xephm_lig_ccmp_clist { { } } % Glyph Composition/Decomposition
114 \clist_set:Nn \l_xephm_lig_dlig_clist { FDF2 = , FDF3 = , FDFB = { } % Discretionary Ligatures
115 \clist_set:Nn \l_xephm_lig_fina_clist { { } } % Final (Terminal) Forms
116 \clist_set:Nn \l_xephm_lig_init_clist { { } } % Initial Forms
117 \clist_set:Nn \l_xephm_lig_locl_clist { { } } % Localized Forms
118 \clist_set:Nn \l_xephm_lig_medi_clist { { } } % Medial Forms
119 \clist_set:Nn \l_xephm_lig_rlig_clist { { } } % Required Ligatures
120 \clist_set:Nn \l_xephm_lig_default_clist { { } }
121
122 \clist_set:Nn \l_xephm_lig_names_clist
123 {
124 \l_xephm_lig_aalt_tl , { \l_xephm_lig_aalt_clist } ,
125 \l_xephm_lig_ccmp_tl , { \l_xephm_lig_ccmp_clist } ,
126 \l_xephm_lig_dlig_tl , { \l_xephm_lig_dlig_clist } ,
127 \l_xephm_lig_fina_tl , { \l_xephm_lig_fina_clist } ,

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128 \l_xephm_lig_init_tl , { \l_xephm_lig_init_clist } ,
129 \l_xephm_lig_locl_tl , { \l_xephm_lig_locl_clist } ,
130 \l_xephm_lig_medi_tl , { \l_xephm_lig_medi_clist } ,
131 \l_xephm_lig_rlig_tl , { \l_xephm_lig_rlig_clist } ,
132 }
133
134 \msg_new:nnn { xepersian-hm } { kashida-character-is-not-available-in-the-main-font }
135 {
136   Sorry,~ kashida~ character~ is~ not~ available~ in~ the~ main~ font~!
137 }
138
139 \msg_new:nnn { xepersian-hm } { value-not-available-for-kashida-option }
140 {
141   Sorry,~ value~ `#1'~ is~ not~ available~ for~ `Kashida'~ option~ yet~!
142 }
143
144 \msg_new:nnn { xepersian-hm } { specify-value-for-kashida-option }
145 {
146   Sorry,~ you~ must~ specify~ a~ value~ for~ `Kashida'~ option~ yet~!
147 }
148
149 \keys_define:nn { xepersian-hm }
150 {
151   Kashida .code:n =
152   {
153     \tl_set:Nn \l_tmpa_tl { #1 }
154     \tl_case:NnTF \l_tmpa_tl
155     {
156       \l_xephm_stretch_glyph_tl
157       {
158         \tl_set:Nn \l_xephm_gap_filler_tl { \l_xephm_stretch_glyph_tl }
159         \AtBeginDocument
160         {
161           \tl_set:Nx \l_xephm_main_font_full_tl { \tex_fontname:D \tex_the:D \tex_font:D }
162           \tl_set:Nx \l_xephm_main_font_name_tl { \l_xephm_main_font_full_tl }
163           \regex_replace_once:nnN { ^"([~/]+)/.* } { \1 } \l_xephm_main_font_name_tl
164           \int_set:Nn \l_xephm_kashida_slot_int { \xetex_charglyph:D \c_xephm_ksh_int }
165           \int_compare:nT { \l_xephm_kashida_slot_int = \c_zero_int }
166           {
167             \msg_error:nn { xepersian-hm } { kashida-character-is-not-available-in-the-m
168           }
169         }
170       }
171       \l_xephm_stretch_hruler_tl
172       {
173         \tl_set:Nn \l_xephm_gap_filler_tl { \l_xephm_stretch_hruler_tl }
174       }
175     } { } { \tl_set:Nx \l_xephm_gap_filler_tl { #1 } }
176     \tl_if_empty:NT \l_xephm_gap_filler_tl { \msg_error:nn { xepersian-hm } { specify-value-for-
177     \bool_set_true:N \l_xephm_kashida_hm_fix_bool

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178     } ,
179
180     linebreakpenalty .code:n =
181     {
182         \int_set:Nn \l_tmpa_int { #1 }
183         \int_case:nnTF \l_tmpa_int
184         {
185             \l_xephm_min_penalty_int { \int_set:Nn \l_xephm_line_break_penalty_int { \l_xephm_min_p
186             \l_xephm_low_penalty_int { \int_set:Nn \l_xephm_line_break_penalty_int { \l_xephm_low_p
187             \l_xephm_med_penalty_int { \int_set:Nn \l_xephm_line_break_penalty_int { \l_xephm_med_p
188             \l_xephm_high_penalty_int { \int_set:Nn \l_xephm_line_break_penalty_int { \l_xephm_high_p
189             \l_xephm_max_penalty_int { \int_set:Nn \l_xephm_line_break_penalty_int { \l_xephm_max_p
190         } { } { \int_set:Nn \l_xephm_line_break_penalty_int { #1 } }
191         \bool_set_true:N \l_xephm_linebreakpenalty_bool
192     } ,
193
194     kashidastretch .code:n =
195     {
196         \tl_set:Nn \l_tmpa_tl { #1 }
197         \tl_case:NnTF \l_tmpa_tl
198         {
199             \l_xephm_fnt_kayhan_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.14 em plus 0.5 e
200             \l_xephm_fnt_kayhannavaar_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.129 em plus 0.5 e
201             \l_xephm_fnt_kayhanpook_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.133 em plus 0.5 e
202             \l_xephm_fnt_kayhansayeh_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.135 em plus 0.5 e
203             \l_xephm_fnt_khoramshahr_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.128 em plus 0.5 e
204             \l_xephm_fnt_khorramshahr_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.13 em plus 0.5 e
205             \l_xephm_fnt_niloofar_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.132 em plus 0.5 e
206             \l_xephm_fnt_paatch_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.127 em plus 0.5 e
207             \l_xephm_fnt_riyaz_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.125 em plus 0.5 e
208             \l_xephm_fnt_roya_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.142 em plus 0.5 e
209             \l_xephm_fnt_shafigh_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.143 em plus 0.5 e
210             \l_xephm_fnt_shafighKurd_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.126 em plus 0.5 e
211             \l_xephm_fnt_shafighUzbek_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.123 em plus 0.5 e
212             \l_xephm_fnt_shiraz_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.122 em plus 0.5 e
213             \l_xephm_fnt_sols_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.124 em plus 0.5 e
214             \l_xephm_fnt_tabriz_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.119 em plus 0.5 e
215             \l_xephm_fnt_titr_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.12 em plus 0.5 e
216             \l_xephm_fnt_titre_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.121 em plus 0.5 e
217             \l_xephm_fnt_traffic_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.124 em plus 0.5 e
218             \l_xephm_fnt_vahid_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.134 em plus 0.5 e
219             \l_xephm_fnt_vosta_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.136 em plus 0.5 e
220             \l_xephm_fnt_yaghut_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.138 em plus 0.5 e
221             \l_xephm_fnt_yagut_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.137 em plus 0.5 e
222             \l_xephm_fnt_yas_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.126 em plus 0.5 e
223             \l_xephm_fnt_yekan_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.141 em plus 0.5 e
224             \l_xephm_fnt_yermook_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.139 em plus 0.5 e
225             \l_xephm_fnt_zar_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.116 em plus 0.5 e
226             \l_xephm_fnt_ziba_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.119 em plus 0.5 e
227             \l_xephm_fnt_default_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.14 em plus 0.5 e

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228         \l_xephm_fnt_noskip_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0 em plus 0.5
229         } { } { \tl_set:Nn \l_xephm_skip_default_tl { #1 } }
230     } ,
231     kashidastretch .default:n = \tl_set:Nn \l_xephm_skip_default_tl { 0 em plus 0.5 em } ,
232
233     ligatures .code:n =
234     {
235         \tl_set:Nn \l_tmpa_tl { #1 }
236         \tl_case:NnTF \l_tmpa_tl
237         {
238             \l_xephm_lig_aalt_tl { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_aalt_tl } }
239             \l_xephm_lig_ccmp_tl { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_ccmp_tl } }
240             \l_xephm_lig_dlig_tl { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_dlig_tl } }
241             \l_xephm_lig_fina_tl { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_fina_tl } }
242             \l_xephm_lig_init_tl { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_init_tl } }
243             \l_xephm_lig_loc1_tl { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_loc1_tl } }
244             \l_xephm_lig_medi_tl { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_medi_tl } }
245             \l_xephm_lig_rlig_tl { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_rlig_tl } }
246             \l_xephm_lig_default_tl { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_default_tl } }
247         } { } { \tl_set:Nn \l_xephm_active_ligs_tl { #1 } }
248         \bool_set_true:N \l_xephm_ligature_bool
249     } ,
250     ligatures .default:n = \tl_set:Nn \l_xephm_active_ligs_tl { \l_xephm_lig_default_tl } ,
251
252 }
253
254 \ProcessKeysOptions { xepersian-hm }
255
256 \bool_if:NT \l_xephm_kashida_hm_fix_bool
257 {
258     \tex_input:D { kashida-xepersian-hm.def }
259 }
260
261 \ExplSyntaxOff
262 \endinput
263 \</xepersian-hm-sty>

```

1.2 File: kashida-xepersian-hm.def

```

264 < *kashida-xepersian-hm-def >
265 \ExplSyntaxOn
266 \ProvidesExplFile {kashida-xepersian-hm.def} {2020-05-12} {0.5e} { Fixes-implementation-of-Kashida-in-XeTeX }
267
268 \newXeTeXintercharclass \c_xephm_d_charclass % dual-joiner class
269 \newXeTeXintercharclass \c_xephm_l_charclass % lam
270 \newXeTeXintercharclass \c_xephm_r_charclass % right-joiner
271 \newXeTeXintercharclass \c_xephm_a_charclass % alef
272 \newXeTeXintercharclass \c_xephm_y_charclass % yeh
273
274 \bool_if:NT \l_xephm_ligature_bool

```

```

275 {
276   \clist_new:N \l_xephm_ligatures_clist
277   \int_new:N \l_xephm_lig_names_len_int
278   \int_set:Nn \l_xephm_lig_names_len_int { \clist_count:N \l_xephm_lig_names_clist }
279   \int_step_inline:nnnn { 1 } { 2 } { \l_xephm_lig_names_len_int }
280   {
281     \int_set:Nn \l_tmpa_int { #1 }
282     \int_set:Nn \l_tmpb_int { \int_eval:n { \l_tmpa_int + 1 } }
283     \tl_set:Nf \l_tmpa_tl { \clist_item:Nn \l_xephm_lig_names_clist { \l_tmpa_int } }
284     \clist_set:Nx \l_tmpa_clist { { \clist_item:Nn \l_xephm_lig_names_clist { \l_tmpb_int } } }
285     \bool_if:nT { \tl_if_eq_p:NN \l_xephm_active_ligs_tl \l_tmpa_tl || \tl_if_eq_p:NN \l_xephm_
286       {
287         \clist_put_left:Nx \l_xephm_ligatures_clist { \l_tmpa_clist }
288       }
289     }
290   \clist_map_inline:Nn \l_xephm_ligatures_clist
291   {
292     \seq_set_split:Nnn \l_tmpa_seq { = } { #1 }
293     \seq_pop_left:NN \l_tmpa_seq \l_tmpa_tl { } { }
294     \seq_pop_left:NN \l_tmpa_seq \l_tmpb_tl { } { }
295     \tl_const:cx { \tl_use:N \l_tmpb_tl } { \char" \l_tmpa_tl \ }
296   }
297 }
298
299 \bool_if:NT \l_xephm_linebreakpenalty_bool
300 {
301   %% Partly adapted from LaTeX2e source
302   \cs_new:Nn \xephm_line_break: {
303     \if_mode_vertical:
304       \GenericError{
305         \space\space\space\space\space\space\space\space\space\space\space\space\space\space\space\space
306       }{
307         LaTeX Error: There's no line here to end
308       }{
309         See the LaTeX manual or LaTeX Companion for explanation.
310       }{
311         Your command was ignored.\MessageBreak
312         Type \space I <command> <return> \space to replace it~
313         with another command,\MessageBreak
314         or \space <return> \space to continue without it.}
315     \else:
316       \l_tmpa_skip \tex_lastskip:D
317       \tex_unskip:D
318       \tex_penalty:D -\l_xephm_line_break_penalty_int
319       \dim_compare:nT { \l_tmpa_skip > \c_zero_skip }
320       { \skip_horizontal:N \l_tmpa_skip \tex_ignorespaces:D }
321     \fi:
322   }
323
324   \NewDocumentCommand { \discouragebadlinebreaks } { 0{\l_xephm_line_break_penalty_int} 0{\c_xephm_sl

```

```

325 {
326   \IfNoValueF {#1}
327     { \int_set:Nn \l_xephm_line_break_penalty_int {#1} }
328   \IfNoValueF {#2}
329     { \tl_set:Nn \l_xephm_skip_default_tl {#2} }
330   \xephm_put_line_breaks:n { #3 }
331 }
332
333 \cs_new_protected:Nn \xephm_put_line_breaks:n
334 {
335   \tl_set:Nn \l_xephm_line_break_tl { #1 }
336   \regex_replace_all:nnN { +([\ ]*) } { { \ \0\ \c{xephm_line_break:}\ } \l_xephm_line_break_tl }
337   \tl_use:N \l_xephm_line_break_tl
338 }
339 }
340
341 %% Partly adapted from the code provided by David Carlisle in:
342 %% https://tex.stackexchange.com/questions/356709/how-to-know-the-width-and-fill-the-glue-space-between-words
343 \cs_new:Npn \xephm_kashida_glyph #1
344 {
345   \bool_if:NT \l_xephm_kashida_hm_fix_bool
346   {
347     \c_xephm_lrm_int\tex_penalty:D 10000
348     \mode_leave_vertical:
349     \tex_global:D \tex_advance:D \l_xephm_counter_int \c_one_int
350
351     \tl_set:Nx \l_xephm_pos_tl { pos_\tex_romannumeral:D \l_xephm_counter_int }
352     \tl_set:Nx \l_xephm_zref_tl { zref_\tex_romannumeral:D \l_xephm_counter_int }
353
354     \zsavexpox{x_i\l_xephm_zref_tl}
355     \tl_set:Nx \l_tmpa_tl
356       {
357         \iow_now:cx { @auxout }
358         {
359           \ExplSyntaxOn
360           \tl_gset:Nn \exp_after:wN \token_to_str:N \cs:w get_x_i\l_xephm_pos_tl \cs_end: { \zposx{#1} }
361           \ExplSyntaxOff
362         }
363       }
364     \l_tmpa_tl
365     \skip_horizontal:n { #1 }
366     \zsavexpox{x_f\l_xephm_zref_tl}
367     \tl_set:Nx \l_tmpa_tl
368       {
369         \iow_now:cx { @auxout }
370         {
371           \ExplSyntaxOn
372           \tl_gset:Nn \exp_after:wN \token_to_str:N \cs:w get_x_f\l_xephm_pos_tl \cs_end: { \zposx{#1} }
373           \ExplSyntaxOff
374         }

```

```

375     }
376     \l_tmpa_tl
377     \exp_after:wN
378     \if_meaning:w
379         \cs:w get_x_i\l_xephm_pos_tl \cs_end: \tex_relax:D
380     \else:
381         \dim_set:Nn \l_xephm_diff_pos_dim
382         {
383             \dim_eval:n { \cs:w get_x_i\l_xephm_pos_tl \cs_end: sp - \cs:w get_x_f\l_xephm_pos_tl \cs_
384         }
385         \dim_compare:nTF { \l_xephm_diff_pos_dim == 0sp }
386         { }
387         { \llap { \resizebox { \l_xephm_diff_pos_dim \tex_relax:D } { \height } { \c_xephm_ksh_int }
388     \fi:
389 }
390 }
391
392 %% Partly adapted from the code provided by Jonathan Kew in:
393 %% https://tug.org/pipermail/xetex/2009-February/012307.html.
394 %% Somebody notified me that the code in 'kashida-xepersian.def' from xepersian
395 %% package is an exact copy of Jonathan Kew's code. Being unaware of this, in
396 %% the earlier versions of this package I made a mistake and acknowledged
397 %% Vafa Khalighi instead of Jonathan Kew. A sincere thank you to Jonathan Kew
398 %% for his excellent code.
399 \cs_new:Npn \xephm_kashida_hrule #1
400 {
401     \bool_if:NT \l_xephm_kashida_hm_fix_bool
402     {
403         \c_xephm_lrm_int\c_xephm_zwj_int\tex_penalty:D 10000
404         \tex_leaders:D \tex_hrule:D height \XeTeXglyphbounds \c_xephm_two_int
405         \int_use:N \XeTeXcharglyph \c_xephm_ksh_int depth \XeTeXglyphbounds \c_xephm_four_int
406         \int_use:N \XeTeXcharglyph \c_xephm_ksh_int \skip_horizontal:n { #1 }
407         \c_xephm_zwj_int
408     }
409 }
410
411 \XeTeXinterchartokenstate = 1
412
413 \clist_set:Nn \l_xephm_a_clist { 0622,0623,0625,0627 } %
414 \clist_map_inline:Nn \l_xephm_a_clist
415 {
416     \XeTeXcharclass "#1 \c_xephm_a_charclass
417 }
418
419 \clist_set:Nn \l_xephm_d_clist { 0626,0628,062A,062B,062C,062D,062E,0633,0634,0635,0636,0637,0638,0639 }
420 \clist_map_inline:Nn \l_xephm_d_clist
421 {
422     \XeTeXcharclass "#1 \c_xephm_d_charclass
423 }
424

```

```

425 \clist_set:Nn \l_xephm_l_clist { 0644 } %
426 \clist_map_inline:Nn \l_xephm_l_clist
427 {
428   \XeTeXcharclass "#1 \c_xephm_l_charclass
429 }
430
431 \clist_set:Nn \l_xephm_r_clist { 0624,0629,062F,0630,0631,0632,0648,0698 } % , , , , , ,
432 \clist_map_inline:Nn \l_xephm_r_clist
433 {
434   \XeTeXcharclass "#1 \c_xephm_r_charclass
435 }
436
437 \clist_set:Nn \l_xephm_y_clist { 0649,064A,06CC } % , ,
438 \clist_map_inline:Nn \l_xephm_y_clist
439 {
440   \XeTeXcharclass "#1 \c_xephm_y_charclass
441 }
442
443 \str_case:VnTF \l_xephm_gap_filler_tl
444 {
445   \l_xephm_stretch_glyph_tl
446   {
447     \XeTeXinterchartoks \c_xephm_y_charclass \c_xephm_y_charclass =
448     {
449       \bool_if:NTF \l_xephm_kashida_hm_fix_bool
450       { \c_xephm_zwj_int \xephm_kashida_glyph \l_xephm_skip_default_tl \c_xephm_zwj_int }
451       { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
452     }
453     \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_y_charclass =
454     {
455       \bool_if:NTF \l_xephm_kashida_hm_fix_bool
456       { \c_xephm_zwj_int \xephm_kashida_glyph \l_xephm_skip_default_tl \c_xephm_zwj_int }
457       { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
458     }
459     \XeTeXinterchartoks \c_xephm_y_charclass \c_xephm_d_charclass =
460     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
461     \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_d_charclass =
462     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
463     \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_d_charclass =
464     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
465     \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_l_charclass =
466     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
467     \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_l_charclass =
468     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
469     \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_r_charclass =
470     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
471     \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_a_charclass =
472     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
473     \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_r_charclass =
474     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }

```

```

475 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_a_charclass =
476 { }
477 }
478 \l_xephm_stretch_hrulerule_tl
479 {
480 \XeTeXinterchartoks \c_xephm_y_charclass \c_xephm_y_charclass =
481 {
482 \bool_if:NTF \l_xephm_kashida_hm_fix_bool
483 { \xephm_kashida_hrulerule \l_xephm_skip_default_tl }
484 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
485 }
486 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_y_charclass =
487 {
488 \bool_if:NTF \l_xephm_kashida_hm_fix_bool
489 { \xephm_kashida_hrulerule \l_xephm_skip_default_tl }
490 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
491 }
492 \XeTeXinterchartoks \c_xephm_y_charclass \c_xephm_d_charclass =
493 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
494 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_d_charclass =
495 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
496 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_d_charclass =
497 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
498 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_l_charclass =
499 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
500 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_l_charclass =
501 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
502 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_r_charclass =
503 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
504 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_a_charclass =
505 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
506 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_r_charclass =
507 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
508 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_a_charclass =
509 { }
510 }
511 } { } { \msg_error:nnx { xepersian-hm } { value-not-available-for-kashida-option } { \l_xephm_gap_
512
513 \NewDocumentCommand \KashidaHMFixOn {} { \bool_set_true:N \l_xephm_kashida_hm_fix_bool }
514 \NewDocumentCommand \KashidaHMFixOff {} { \bool_set_false:N \l_xephm_kashida_hm_fix_bool }
515
516 \tex_let:D \KashidaOn \KashidaHMFixOn
517 \tex_let:D \KashidaOff \KashidaHMFixOff
518
519 \bool_if:NTF \l_xephm_kashida_hm_fix_bool
520 {
521 \tl_if_empty:NT \l_xephm_skip_default_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.14 em plus 0
522 }
523 {
524 \tl_set:NV \l_xephm_skip_default_tl \c_xephm_skip_a_tl

```

```
525   }  
526  
527 \ExplSyntaxOff  
528  
529 \makeatletter  
530 \newif\if@Kashida@on  
531 \newif\if@Kashida@XB@fix  
532 \makeatother  
533  
534 \endinput  
535 </kashida-xepersian-hm-def>
```

Acknowledgements

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