

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

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Released 2020-05-20 v0.5f

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} {2020-05-20} {0.5f} { 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 } { error-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 } { error-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 } { error-specify-value-for-kashida-option }
145 {
146   Sorry,~ you~ must~ specify~ a~ value~ for~ `Kashida'~ option~ yet~!
147 }
148
149 \msg_new:nnn { xepersian-hm } { warning-experimental-feature }
150 {
151   Please~ note~ that~ the~ feature~ `#1'~ is~ still~ experimental~
152   and~ is~ not~ regarded~ as~ stable.
153 }
154
155 \keys_define:nn { xepersian-hm }
156 {
157   Kashida .code:n =
158   {
159     \tl_set:Nn \l_tmpa_tl { #1 }
160     \tl_case:NnTF \l_tmpa_tl
161     {
162       \l_xephm_stretch_glyph_tl
163       {
164         \tl_set:Nn \l_xephm_gap_filler_tl { \l_xephm_stretch_glyph_tl }
165         \AtBeginDocument
166         {
167           \tl_set:Nx \l_xephm_main_font_full_tl { \tex_fontname:D \tex_the:D \tex_font:D }
168           \tl_set:Nx \l_xephm_main_font_name_tl { \l_xephm_main_font_full_tl }
169           \regex_replace_once:nnN { ^"([^\s]+)/.* } { \1 } \l_xephm_main_font_name_tl
170           \int_set:Nn \l_xephm_kashida_slot_int { \xetex_charglyph:D \c_xephm_ksh_int }
171           \int_compare:nT { \l_xephm_kashida_slot_int = \c_zero_int }
172           {
173             \msg_error:nn { xepersian-hm } { error-kashida-character-is-not-available-in-
174             }
175           }
176         }
177       }
178     }
179   }

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

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228         \l_xephm_fnt_yas_tl          { \tl_set:Nn \l_xephm_skip_default_tl { 0.126 em plus 0.5 }
229         \l_xephm_fnt_yekan_tl        { \tl_set:Nn \l_xephm_skip_default_tl { 0.141 em plus 0.5 }
230         \l_xephm_fnt_yermook_tl      { \tl_set:Nn \l_xephm_skip_default_tl { 0.139 em plus 0.5 }
231         \l_xephm_fnt_zar_tl          { \tl_set:Nn \l_xephm_skip_default_tl { 0.116 em plus 0.5 }
232         \l_xephm_fnt_ziba_tl         { \tl_set:Nn \l_xephm_skip_default_tl { 0.119 em plus 0.5 }
233         \l_xephm_fnt_default_tl       { \tl_set:Nn \l_xephm_skip_default_tl { 0.14 em plus 0.5 }
234         \l_xephm_fnt_noskip_tl       { \tl_set:Nn \l_xephm_skip_default_tl { 0 em plus 0.5 }
235     } { } { \tl_set:Nn \l_xephm_skip_default_tl { #1 } }
236 },
237 kashidastretch .default:n = \tl_set:Nn \l_xephm_skip_default_tl { 0 em plus 0.5 em } ,
238
239 ligatures .code:n =
240 {
241     \tl_set:Nn \l_tmpa_tl { #1 }
242     \tl_case:NnTF \l_tmpa_tl
243     {
244         \l_xephm_lig_aalt_tl          { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_aalt_tl } }
245         \l_xephm_lig_ccmp_tl         { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_ccmp_tl } }
246         \l_xephm_lig_dlig_tl         { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_dlig_tl } }
247         \l_xephm_lig_fina_tl         { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_fina_tl } }
248         \l_xephm_lig_init_tl         { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_init_tl } }
249         \l_xephm_lig_loc1_tl         { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_loc1_tl } }
250         \l_xephm_lig_medi_tl         { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_medi_tl } }
251         \l_xephm_lig_rlig_tl         { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_rlig_tl } }
252         \l_xephm_lig_default_tl      { \tl_set:Nx \l_xephm_active_ligs_tl { \l_xephm_lig_default_tl } }
253     } { } { \tl_set:Nn \l_xephm_active_ligs_tl { #1 } }
254     \bool_set_true:N \l_xephm_ligature_bool
255 },
256 ligatures .default:n = \tl_set:Nn \l_xephm_active_ligs_tl { \l_xephm_lig_default_tl } ,
257
258 }
259
260 \ProcessKeysOptions { xepersian-hm }
261
262 \bool_if:NT \l_xephm_kashida_hm_fix_bool
263 {
264     \tex_input:D { kashida-xepersian-hm.def }
265 }
266
267 \ExplSyntaxOff
268 \endinput
269 </xepersian-hm-sty>

```

1.2 File: kashida-xepersian-hm.def

```

270 <{*kashida-xepersian-hm-def>
271 \ExplSyntaxOn
272 \ProvidesExplFile {kashida-xepersian-hm.def} {2020-05-20} {0.5f} { Fixes-implementation-of-Kashida-in- }
273
274 \newXeTeXintercharclass \c_xephm_d_charclass % dual-joiner class

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

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

```



```

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

```

```

425 }
426
427 \clist_set:Nn \l_xephm_l_clist { 0644 } %
428 \clist_map_inline:Nn \l_xephm_l_clist
429 {
430   \XeTeXcharclass "#1 \c_xephm_l_charclass
431 }
432
433 \clist_set:Nn \l_xephm_r_clist { 0624,0629,062F,0630,0631,0632,0648,0698 } % , , , , , ,
434 \clist_map_inline:Nn \l_xephm_r_clist
435 {
436   \XeTeXcharclass "#1 \c_xephm_r_charclass
437 }
438
439 \clist_set:Nn \l_xephm_y_clist { 0649,064A,06CC } % , ,
440 \clist_map_inline:Nn \l_xephm_y_clist
441 {
442   \XeTeXcharclass "#1 \c_xephm_y_charclass
443 }
444
445 \str_case:VnTF \l_xephm_gap_filler_tl
446 {
447   \l_xephm_stretch_glyph_tl
448   {
449     \XeTeXinterchartoks \c_xephm_y_charclass \c_xephm_y_charclass =
450     {
451       \bool_if:NTF \l_xephm_kashida_hm_fix_bool
452       { \c_xephm_zwj_int \xephm_kashida_glyph \l_xephm_skip_default_tl \c_xephm_zwj_int }
453       { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
454     }
455     \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_y_charclass =
456     {
457       \bool_if:NTF \l_xephm_kashida_hm_fix_bool
458       { \c_xephm_zwj_int \xephm_kashida_glyph \l_xephm_skip_default_tl \c_xephm_zwj_int }
459       { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
460     }
461     \XeTeXinterchartoks \c_xephm_y_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_d_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_l_charclass \c_xephm_d_charclass =
466     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
467     \XeTeXinterchartoks \c_xephm_d_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_l_charclass \c_xephm_l_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_r_charclass =
472     { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
473     \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_a_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_r_charclass =
476 { \c_xephm_zwj_int \xephm_kashida_glyph \c_xephm_skip_a_tl \c_xephm_zwj_int }
477 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_a_charclass =
478 { }
479 }
480 \l_xephm_stretch_hrulerule_tl
481 {
482 \XeTeXinterchartoks \c_xephm_y_charclass \c_xephm_y_charclass =
483 {
484 \bool_if:NTF \l_xephm_kashida_hm_fix_bool
485 { \xephm_kashida_hrulerule \l_xephm_skip_default_tl }
486 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
487 }
488 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_y_charclass =
489 {
490 \bool_if:NTF \l_xephm_kashida_hm_fix_bool
491 { \xephm_kashida_hrulerule \l_xephm_skip_default_tl }
492 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
493 }
494 \XeTeXinterchartoks \c_xephm_y_charclass \c_xephm_d_charclass =
495 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
496 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_d_charclass =
497 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
498 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_d_charclass =
499 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
500 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_l_charclass =
501 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
502 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_l_charclass =
503 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
504 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_r_charclass =
505 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
506 \XeTeXinterchartoks \c_xephm_d_charclass \c_xephm_a_charclass =
507 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
508 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_r_charclass =
509 { \xephm_kashida_hrulerule \c_xephm_skip_a_tl }
510 \XeTeXinterchartoks \c_xephm_l_charclass \c_xephm_a_charclass =
511 { }
512 }
513 }
514 {
515 \msg_warning:nnn { xepersian-hm } { warning-experimental-feature } { Kashida=glyph }
516 }
517 {
518 \msg_error:nnx { xepersian-hm } { error-value-not-available-for-kashida-option } { \l_xephm_gap_ }
519 }
520
521 \NewDocumentCommand \KashidaHMFixOn {} { \bool_set_true:N \l_xephm_kashida_hm_fix_bool }
522 \NewDocumentCommand \KashidaHMFixOff {} { \bool_set_false:N \l_xephm_kashida_hm_fix_bool }
523
524 \tex_let:D \KashidaOn \KashidaHMFixOn

```

```

525 \tex_let:D \KashidaOff \KashidaHMFixOff
526
527 \bool_if:NTF \l_xephm_kashida_hm_fix_bool
528   {
529     \tl_if_empty:NT \l_xephm_skip_default_tl { \tl_set:Nn \l_xephm_skip_default_tl { 0.14 em plus 0
530   }
531   {
532     \tl_set:NV \l_xephm_skip_default_tl \c_xephm_skip_a_tl
533   }
534
535 \ExplSyntaxOff
536
537 \makeatletter
538 \newif\if@Kashida@on
539 \newif\if@Kashida@XB@fix
540 \makeatother
541
542 \endinput
543 </kashida-xepersian-hm-def>

```

Acknowledgements

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