

# CTT: Remove Most Cyrillic Contractions

2014-aug-05  
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## Proposal

Remove from the Common Template Table all Cyrillic contractions, except for Ѣ (and Ў) which are used in Russian and many other languages.

(Ѣ=U+0439, Ў=U+0419: Cyrillic Small/Capital Letter Short I)

For example, change mappings like

```
<U04D9> <S04D9>;<BASE>;<MIN>;<U04D9> % CYRILLIC SMALL LETTER SCHWA
<U04D8> <S04D9>;<BASE>;<CAP>;<U04D8> % CYRILLIC CAPITAL LETTER SCHWA
<U04DB> <S04DB>;<BASE>;<MIN>;<U04DB> % CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS
<U04D9_0308> <S04DB>;<BASE>;<MIN>;<U04DB> % CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS
<U04DA> <S04DB>;<BASE>;<CAP>;<U04DA> % CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS
<U04D8_0308> <S04DB>;<BASE>;<CAP>;<U04DA> % CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS
```

to

```
<U04D9> <S04D9>;<BASE>;<MIN>;<U04D9> % CYRILLIC SMALL LETTER SCHWA
<U04D8> <S04D9>;<BASE>;<CAP>;<U04D8> % CYRILLIC CAPITAL LETTER SCHWA
<U04DB> <S04D9>; "<BASE><TREMA>"; "<MIN><MIN>"; <U04DB> % CYRILLIC SMALL LETTER SCHWA WITH
DIAERESIS
<U04DA> <S04D9>; "<BASE><TREMA>"; "<CAP><MIN>"; <U04DA> % CYRILLIC CAPITAL LETTER SCHWA WITH
DIAERESIS
```

and remove the then-unused contraction strings like

```
collating-element <U04D8_0308> from "<U04D8><U0308>" % decomposition of CYRILLIC CAPITAL
LETTER SCHWA WITH DIAERESIS
collating-element <U04D9_0308> from "<U04D9><U0308>" % decomposition of CYRILLIC SMALL
LETTER SCHWA WITH DIAERESIS
```

and remove their primary weights from the % First-level weight assignments

```
<S04DB> % CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS
```

## Rationale

The presence of these contractions makes collation of Cyrillic text slower for all implementations of UCA and ISO 14651, due to the required lookahead. For example, it slows down Cyrillic-text collation by 20-30% in [ICU](#), which is by far the most prevalent implementation of the Unicode Collation Algorithm and the Common Template Table.

Performance of collation is vital because collation is used in many processes on the internet and in databases, including sorting, searching in a sorted table, full-text search, range selection, etc. In most applications, collation is done incrementally, on demand, rather than by using sort keys.

The original rationale for including contractions for many Cyrillic accented letters in the CTT and the DUCET was to provide more accurate default (untailored) collation for many languages. However, almost all languages

