In consideration of the problem, I think it’s best to keep alternate radical-stroke indices from being part of the 10646 data files. I’m concerned that having them there means that a change would have to be made to a normative property in 10646 every time a new alternate radical-stroke count pops up, as they do from time to time.

I would therefore recommend making a new field, kRSAlternate. It would use the same syntax as is currently used by kRSUnicode and be provisional. The description would be:

“This field is supplementary to kRSUnicode and contains alternate radical-stroke counts for characters. There are a small number of ideographs which could be reasonably indexed under multiple radical-stroke counts. One example is U+521D 初. It is found in dictionaries both under radical 18 with five additional strokes and under radical 145 with two additional strokes. Because the KangXi dictionary uses the former, its ‘official’ radical-stroke index for the IRG is 18.5. The kRSAlternate field can then be used to indicate that 145.2 is also an acceptable radical-stroke index.

“The kRSAlternate field is intended for use in generating radical-stroke charts (such as are included in the Unicode Standard) and for radical-stroke lookup. Note that for sorting purposes, kRSUnicode should be used exclusively, whereas for radical-stroke lookup (as in an input method), both kRSUnicode and kRSAlternate should be used.”

I should have an action item to populate the new field, remove the multiple values from kRSUnicode, and update UAX #38 accordingly. The description of the kRSUnicode field should be updated as well to remove references to multiple values.

I should point out, by the way, that only 36 characters have multiple values in their kRSUnicode fields and eight of those are the result of minor ambiguities in the stroke-counting process. The kRSAlternate field would therefore be initially populated with the following 26 values:

U+3687 kRSAlternate 66.6
U+49F9 kRSAlternate 53.10
U+51E1 kRSAlternate 3.2
U+521D kRSAlternate 145.2
U+52D7 kRSAlternate 73.7