

Proposal for an option in UAX #31 to prohibit ZWJ/ZWNJ for identifier security

In response to action item [165-A44](#)

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This document proposes a profile option to be added in UAX #31 and or UTS#49 to prohibit ZWJ/ZWNJ altogether, for better identifier security. This behavior would match the DNS Root Zone, where ZWJ and ZWNJ are strictly prohibited. Similarly strict restrictions are likely appropriate for at least Second Level Domain.

Rationale

The few cases where ZWJ or ZWNJ have true orthographic status (as opposed to more stylistic selection among different appearance) in the view of many do not outweigh the security risks associated with them as invisible character the presence of which may not always be detectable.

In this context it's useful to note that the purpose of identifiers is always to have a "useful mnemonic" and not to allow faithful representation of every word or phrase for some language(s).

As already alluded to above, while these are allowed (with strict context rules) in IDNA2008, they are categorically excluded from the DNS Root Zone¹, as well as from Reference LGRs for the Second Level.

¹ See <https://www.icann.org/resources/pages/root-zone-lgr-2015-06-21-en> and look for the "Procedure to Develop and Maintain Label Generation Rules for the Root Zone with Respect to IDNA Labels".