

Re: Add email identifier profile to TR39
 To: UTC
 From: Mark Davis
 Date: 2014-11-28
 Link: [live link](#)

EAI allows almost any character in the local-part of an email address. That means that you could have something completely bizarre, like all non-spacing marks.

We already have *Section 3.2 [IDN Security Profiles for Identifiers](#)*. We have gotten internal requests to have something similar for email addresses. Such identifier profiles are typically used in a few ways, such as:

1. When an email address is registered, flag anything that doesn't meet the profile:
 - Either forbid the registration, or
 - Allow for an appeals process.
2. When an email address is detected in linkification of plain text:
 - Don't linkify if the identifier doesn't meet the profile.
3. When an email address is displayed in incoming email
 - Flag it as suspicious with a wavy underline, if it doesn't meet the profile.

Here is a rough draft of what the identifier profile could look like—for further discussion in the UTC meeting.

A. Add a new *Section 3.3 Email Security Profiles for Identifiers*. The core of this would be:

To meet the requirements of the *Identifier Profile for Email Addresses*, an identifier must satisfy the following conditions for the specified **<restriction level>**:

The domain part must satisfy *Section 3.2 [IDN Security Profiles for Identifiers](#)*, and satisfy the conformance clauses of [UTR#46](#).

The local-part must satisfy all the following conditions:

1. be in NFKC format.
2. have level = **<restriction level>** or less, from [Restriction Level Detection](#)
3. not have mixed number systems according to [Mixed Number Detection](#)
4. satisfy **dot-atom-text** from [RFC 5322 §3.2.3](#), where **atext** is extended to be:
 - a. where $C \leq U+007F$, $C \in [!#-!*+ _ / - 9 = ? A - Z \ \ ^ \ - \ ~]$
 - b. where $C > U+007F$, both of the following conditions are true:
 - i. C has Status = allowed from [General Security Profile](#)
 - ii. if C is the first character, it must be **XID_Start** from [Default Identifier Syntax \(UAX 31\)](#)

The BIDI controls are specifically disallowed in email addresses.

Note:

- We could allow some extra symbols in 4.b.ii that are relatively unproblematic, much as [Swift Variables](#) do.

B. Also, enhance the *Section 3.2 [IDN Security Profiles for Identifiers](#)* to allow for specification of a restriction level.