

Network Working Group
Internet-Draft
Intended status: Informational
Expires: August 27, 2011

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Projet.FRA
February 26, 2011

**Orthotypographic support by IDNA2008: an IUse point of view.
draft-iucg-idna2008-orthotypography-00.txt**

Abstract

IDNA 2008 does not support, as such, the language orthotypography that IUsers need and that the evolution towards the Intersem (Semantic Internet) reclaims. This memo introduces the positive position of the IUse community on the matter.

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Requirements notation

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [[RFC2119](#)].

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1. Introduction

This memo clarifies the IUser point of view, regarding the lack of orthotypographic support by IDNA2008. This may be of interest, since we initially and determinedly opposed case-folding as an example of this general lack of orthotypographic support. However, we were able to join the final consensus because it acknowledges an existing, yet ignored, major and powerful capacity of the Internet technology to support the diversity that is necessary for a main component of the world digital ecosystem.

2. IUse emerging community

An IUser is a member of the IUse emerging community who is interested in the people centric convergent use of the Internet along with the other (smart or not) available bandwidths from the world digital ecosystem. IUse can be understood as the Intelligent Use of the World Digital Ecosystem. Intelligence (inter-legere), should be understood at the three layers of interlinking information knowledge, and the clever use of that interlinking knowledge.

3. We accepted John Klensin's position

During the WG/IDNABis work, we were able to identify that IDNA2008 casefolding permitted a clear and stable response for the Internet bandwidth that we could typically interface with our own ML-DNS (multi-naming-layer language/technology/context independent) concept. Such an ML-DNS, as we explore and work on it, could be documented as another [RFC 5895](#)-like example on the user side of the network side IDNA2008: its particularity is to manage a naming pile rather than a single name and to

4. The WG did not care about French

This ML-DNS of us addresses our "Projet.FRA" needs for a Francophone open ontology using its name space as an ontology and a semantic network, which I reported to the IESG Last Call.
<http://tools.ietf.org/id/draft-iucg-afra-reports-00.txt>.

4.1. we reported it to IESG/LC

It emphasizes that IDNA2008 does not support French majuscules (first letter in a phrase or in an important word) that Unicode does not support either, except as uppercases and, therefore, our obligation to build a solution on top of IDNA2008. This is because Unicode tables document a mechanical typography, and registrants need to have their orthotypography rules (and not tables) supported (orthotypography is the syntax of the way one writes a language - something that is out of the IDNA2008 and Unicode scope). French

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language speakers unwaveringly demand such a support as well as the other Latin language speakers. To explain: "Etat" means "State/Government," etat" means "status", etc. That situation calls for:

- * a mapping of everything to lowercase so that everything is stable, clear, and secure.
- * us to add the majuscule information as a metadata that we investigated in <http://tools.ietf.org/id/draft-iucg-punyplus-03.txt>.

4.2. our position is qualified as "research"

The IESG considered our position and our plea for a quick validation of the IDNA2008 consensual document set (so that we would know the rock to build upon). IESG also considered our proposition as "research". Since we have other topics for semantic research on this project, we are considering different choices with members of the MAAYA network (linguistic diversity) and will introduce ".fra" (along with other projects we call "xTLD"s, i.e. experimental TLDs, once ICANN finishes its gTLD rigmarole, in order to avoid any unnecessary naming conflicts). We will first document a charter on the way to use the Internet as its own test bed through an RFC for information on "intertesting" in gathering different ICANN and IETF requirements.

5. Strength of IDNA2008 and IDNA weakness

Another reason why we pleaded for IDNA2008 to be quickly accepted was that the AD (once we had completed the WG/LC and IETF/LC) started to question, and rightly so, the IDNA principle itself. As [RFC 6055](#) partly also does: will different applications present the same A-label to the DNS? Our ML-DNS vision addresses that concern because it extends the DNS and, therefore, utilizes a single Internet DNS Use Interface with unchanged applications that are transparent to the U-label actually entered by the Users.

5.1. The presentation layer

This is the role of the presentation layer. "The Presentation Layer is responsible for the delivery and formatting of information to the application layer for further processing or display." The Internet presentation layer was virtual. It was introduced by i-DNS and by IDNA2003 in using the "xx--" ACE prefixes. Yet the idea to dedicate it to the sole linguistic names at user application layer (i.e. outside of the network area) was only a patch that the ML-DNS (i.e. on top of the DNS in the network area) corrects. Applications like browsers have nothing to do with domain name massaging, we just want them to pass our entries to the domain name management systems

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(plural, as we may or not be using the Internet or the Internet technology, and the DNS or not).

5.2. The IUI

However, this introduces the notion of a fringe IUI (Internet Use Interface) that faces no problem in becoming an "Intelligent Use Interface" with multiple technologies, and to consider an IUDNS (intelligent use domain name space) of which the Internet domain space is a small yet open part, of which the class IN is 1/65,000-th and of which the ICANN root space is a tiny commercial chunk.

5.3. Technical vs. technico-commercial disagreement

IAB [RFC 3869](#) explains as to why the commercial reasons of applications developers, who are also service providers, such as Microsoft and Google, and their Unicode consortium, may lead some of their employees to plea/lobby against common technical interest, for an internet that pays better rather than works better. The same, paying services or immaterial goods merchants may prefer a client/server architecture tying users to their proprietary offer (such as Apple etc., which is another Unicode consortium leading member). However, some IETF leaders and smart Google people have now swallowed and are digesting the optional change introduced by IDNA2008 with:

- * the "inside" Internet
- * encapsulated into an uncoupled peripheral extended (intelligent) services "IUI" (Internet Use Interface), interfacing the user universe,
- * itself accessing and operating the Internet and other systems of the world digital ecosystem through their own "IUI" (Intelligent Use Interface).

6. A strictly conformant architectural enhancement

This change totally conforms with the Internet architectural principles:

6.1. [RFC 1958](#) principle of constant change

The change is dramatic but does not require a single bit change in the code. It consists in looking at the Internet from the outside rather than from the inside.

6.2. [RFC 3439](#) principle of simplicity

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Why give huge and unlimited DNS responsibility to browsers and applications. Let's keep it simple. ASCII just works, let not fix it with complexity (cf. the exemple of this thread)

6.3. [RFC 5890](#) to [RFC 5895](#) set contribution

These RFC set unlimitedly "multiplies by division" the power of the Internet in installing an endlessly diversified intelligent capacity to match external diversity (such as linguistic diversity) where [RFC 1958](#) and all the IETF culture puts it: at the fringe. By doing so, it acknowledges that the Internet technology matches a third fundamental networking principle, the principle of subsidiarity.

7. The IUse community primary targets

Based on the ML-DNS/IUI principle, we mainly target seven fringe to fringe areas:

7.1. active/ambient content

The internet currently only supports passive content (what I receive is what was sent). We need active (what I receive is what the sender intended me to receive) and ambient (what I receive is what corresponds to my current context) contents to be supported.

7.2. extended network services

We want to get local slots supported (smart local operative tasks), i.e. local OPES or peers to the remote connection peers able to uncouple the client/server interoperations and extend the user's experience of the used network's technology.

7.3. semantic networking

We consider three main communication strata serving

- * signal/data basic services,
- * content (passive [value-added services], active and ambient [extended services]),
- * and semiotic/semantic (facilitation services). Semiotic means the incorporation of many sources of perception and utterance other than script and dumb voice and image. Semantic means the exchange of meanings that can be extracted and processed by the facilitation services along with the perceived context and the receiving mood and options. Semantics' coherence is as precise as geometry's correspondance and mathematics equivalence. Their figures only can be draft, computed or discussed.

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7.4. multilingualisation

We consider an anthropobotic society where machines and people interspeak. This means that several new linguistic disciplines must be considered:

7.4.1. "multilinguistics"

We understand "multilinguistics" as the study of the way several languages may coexist in use, machines, process, and society, and be treated as equal (multilingualisation is a layer above Unicode's globalization in the sense that it could be termed as a specific value added equal globalization of every natural language). A multilinguistic Internet would probably focus on a score of languages, and then 150 main languages in an operational community effort, and a standardized approach for volunteers and/or local authorities to get other natural languages (22.500) identified, documented, and supported.

7.4.2. "mecalinguistics"

We understand "mecalinguistics" as the study of the way to manage machines' natural language and their interinfluence with the language version of the language. Example: English and MecaEnglish and MecaFrench.

7.4.3. metalinguistics

Up to now metalanguages were rather limited depending on the natural language being considered, French being probably the most metalanguage embedded. However, facilitation is going to call on ontographies and ontologies that will lead to a generalization of the mostly French used "metaduction" (what is wrongly termed "Cartesian") as a simplification of deduction, induction, abduction, and hypothetico-deduction in front of the apparent networking complexity ([RFC 3439](#) is a network oriented prerequisite in this area).

7.5. convergence of the digital ecosystem use:

The World Summit on the Information Society has clearly defined the humanity consensual target of a digital societal support being "people centered, a caractere humain, centrada en la persona". We assign the IUI the role to provide the user with an equal alternative basic, value added, extended and facilitated, and stable enough networking experience with any digital technology and digital communication network environment.

7.6. personal digital empowerment:

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Through the above, the definition of a user oriented (graphic sign) international network character set (e.g. Bulgaria IDNccTLD problem), the establishment of an MDRS (metadata distributed registry system) to be understood as a distributed personal super-IANA cognition center for the three strata that we defined and their related services, etc. we want to ensure the full e-empowerment of every person (we make the difference between a user in a (de)centralized user (i.e. customer) centric approach and a person in a person centric distributed and/or intricate environment.

7.7. diktiologies support:

Since "diktyos" in Greek means network, diktyology has two meanings:

7.7.1. the science of networks

Diktyology should be understood as the science of studying networks, at large, from quarks to the Internet through to political and commercial lobbies.

7.7.2. networked ontology

A diktyology is by equivalence the multidimensional, diversified, open, and intricate network equivalent to an ontology. What "Projet.FRA" actually targets is a Francophone diktyology associated to a diktyography. Some network level and distributed/intricate integrated semantic web equivalent to be used and completed by people through the MDRS.

8. Market evolution

Now, some clever service provider's people will understand where the market lies for their corporation in this IUse usage evolution, and they will be the network commercial leaders of tomorrow. Others will not, and they will see the progressive obsolescence of their market share. What is interesting is that the coming Brussels talk between ICANN and GAC may trigger a fast evolution if they obstinately (both sides) continue to ignore Vint Cerf's proposition, as the WG/IDNABis Chair, that the user oriented debate in the continuation of IDNA2008 should be managed by ICANN. I opposed that because ICANN does not represent users, but that was unnecessary: ICANN is not even interested in the matter (don't ask me why), even if it leads to total confusion in their part of the IUDNS.

9. Current situation

I/we delayed the introduction of ML-DNS for personal health (in my case) as well as for strategic reasons, to give time to the IESG, IAB, and Unicode members to consider where/how these issues should be

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addressed and documented, and to permit ICANN to reconsider, due to its new BoD Members. So far,

9.1. IESG and IAB

IESG and IAB were clear enough through their response to my appeal for them not to alert the IETF community: the IUI does not belong to their "inside" Internet scope (moreover, it will deal with many other technologies), I am taking this into account to try to structure the IUse community, using the iucg@ietf.org non-WG mailing list as an open liaison between the two scopes.

9.2. Unicode

Unicode has not introduced any proposition to support orthotypographic metadata.

9.3. ICANN

ICANN has continued to enlarge their GAG (gTLD applicant Guide).

10. Security Considerations

This text covers a change in the perception of the Internet architecture, which may raise considerable security concerns outside of the "inside" Internet.

11. IANA Considerations

This text covers a situation where the IANA will totally change its nature, in turn becoming distributed and entangled with private referents on each person's system.

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