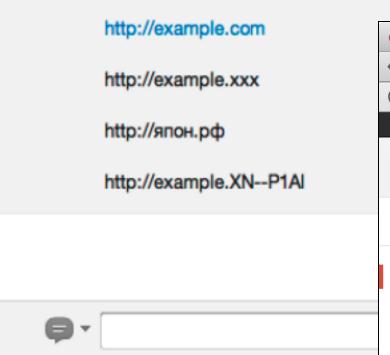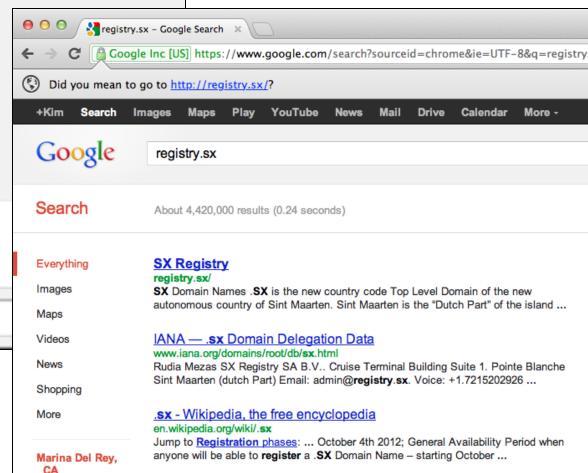# Universal Acceptance of All TLDs

18 May 2012

What is Universal Acceptance?

- Ensure that software on the Internet universally accepts all domains (both ASCII and IDN domains)

- Does not cover policy aspects of what domains should be allowed or restricted

Acceptability Issues Example

http://example.com

http://example.xxx

http://япон.рф

http://example.XN--P1AI

registry.sx – Google Search

Google Inc [US] https://www.google.com/search?sourceid=chrome&ie=UTF-8&q=registry.

Did you mean to go to http://registry.sx/?

+Kim **Search** Images Maps Play YouTube News Mail Drive Calendar More

Google

registry.sx

Search   About 4,420,000 results (0.24 seconds)

Everything

Images

Maps

Videos

News

Shopping

More

Marina Del Rey, CA

SX Registry
registry.sx/
SX Domain Names .**SX** is the new country code Top Level Domain of the new autonomous country of Sint Maarten. Sint Maarten is the "Dutch Part" of the island ...

IANA — .sx Domain Delegation Data
www.iana.org/domains/root/db/**sx**.html
Rudia Mezas SX Registry SA B.V.. Cruise Terminal Building Suite 1. Pointe Blanche Sint Maarten (dutch Part) Email: admin@**registry**.**sx**. Voice: +1.7215202926 ...

.**sx** - Wikipedia, the free encyclopedia
en.wikipedia.org/wiki/.**sx**
Jump to Registration phases: ... October 4th 2012; General Availability Period when anyone will be able to register a .**SX** Domain Name – starting October ...

Hat tip: http://domainincite.com/google-chrome-handles-new-tlds-badly/

Acceptability Issues Example

Examples of Causes

- Improper logic in software for checking valid domains

- Lack of IDNA support

- Old software that is not yet upgraded

- Issues caused by publicsuffix.org?

Example of Hard-Coded List

Example of String Length Check

But you can do much more with regular expressions. In a text editor like EditPad Pro or a specialized text processing tool like PowerGREP, you could use the regular expression `\b[A-Z0-9._%+-]+@[A-Z0-9.-]+\.[A-Z]{2,4}\b` to search for an email address. *Any* email address, to be

All TLDs must be 2-4 ASCII letters (A-Z)

So how does one universally accept domains?

Checking TLDs

- Do you need to check domain validity?
  - If not, don't do it. Rethink why you do it.
  - e.g. if it is an email that needs to opt-in, will be caught that way

- If so, is it an online application?
  - If so, use a DNS query which is instant and up-to-date, don't rely on a fixed list.

- Last case scenario
  - Use a fixed list of TLDs, but make sure it has an update mechanism (e.g. once per day)

Don't forget IDNs

- Multiple representations of the same domain

- New concepts like "right-to-left"

- Not just in the "domain name" field, can be in email addresses, web addresses, name servers, and elsewhere.

10

例え.テスト

xn--r8jz45g.xn--zckzah

A-label

What's been done so far?

Activities to Date: *2003-2004*

- SSAC recommendations:
  - Develop an advisory
  - Create central repository of known issues
  - Internet Infrastructure providers and Internet software application developers review and test software to support new TLDs

- IAB - RFC3696

   "Application Techniques for Checking and Transformation of Names"

Activities since 2004 (1/2)

- Discussion forum and dedicated web page

- Prepared technical recommendations

- Posted TLD verification tool, see github.com/icann

14

Public Repositories (5)

Find a Repository...

All Repositories   Sources   Forks   Mirrors

📖 **uniaccept-python**   Python   👁 5   ⑂ 4

Universal Acceptance Toolkit for Python
Last updated 2 months ago

▥ all commits ■ commits by owner   52 week participation

📖 **uniaccept-java**   Java   👁 1   ⑂ 1

Universal Acceptance Toolkit for Java
Last updated 3 months ago

▥ all commits ■ commits by owner   52 week participation

📖 **uniaccept-c**   C   👁 2   ⑂ 1

Universal Acceptance Toolkit for C
Last updated 3 months ago

▥ all commits ■ commits by owner   52 week participation

📖 **uniaccept-cs**   C#   👁 2   ⑂ 1

Universal Acceptance Toolkit for C#
Last updated 3 months ago

▥ all commits ■ commits by owner   52 week participation

📖 **uniaccept-perl**   Perl   👁 1   ⑂ 1

Universal Acceptance Toolkit for Perl
Last updated 3 months ago

▥ all commits ■ commits by owner   52 week participation

Activities since 2004 (2/2)

- "Initial Report on Universal Acceptance of IDN TLDs" published by JIG Working Group

- Consultations with impacted parties

- Round table in Costa Rica

What should we do now?

ICANN tasks

- Out reach campaign

- Improve TLD verification libraries

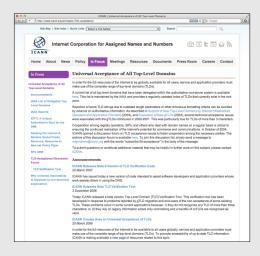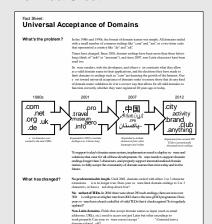- Create and share informational and educational materials

- (Your idea here.)

Draft outreach materials

Your tasks

- "Walk it like you talk it" — do all your applications properly support all domains?

- Inform and educate vendors and others

- Feedback to: tld-acceptance@icann.org

20

Thank You