

Universal Acceptance of All TLDs

JIG 12 June 2012

What is Universal Acceptance?



- Ensure that software on the Internet universally accepts all domains, ASCII and IDN
- 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

www.google.com/search?aq=f&sourceid=chrome&ie=UTF-8&q=registry.sx

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

Search registry.sx

About 5,220,000 results (0.26 seconds)

Web

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 ...

FAQ
FAQ. General; Disputes; Whois; Trades & Transfers; Deleting ...

About
Why .co.nl Registration of a .co.nl domain does not require local ...

SX Registration Policies v2.5 jcv
Policies means these .SX Domain Name Registration Policies ...

EPP API
What is an API? An application programming interface (API) is ...

[More results from registry.sx »](#)

Marina Del Rey, CA
Change location

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 ...

Show search tools

Hat tip: <http://domainincite.com/8978-google-chrome-handles-new-tlds-badly>

Acceptability Issues Example

Permanent Home Address Line 1*:

Permanent Home Address Line 2:

City*:

Zip Code*: -

Note: You must be a U.S. resident

SSN*: - -

Date of Birth*: / / (MM/DD/YYYY)

You must be 18 or older, 19 in Al

Mother's Maiden Name*:

E-mail Address: @ .

State*: CA

No P.O.

be cons

- aero
- biz
- com
- coop
- edu
- gov
- info
- mil
- museum
- name
- net
- org
- pro
- us

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

```
472 "tz", // Tanzania
473 "ua", // Ukraine
474 "ug", // Uganda
475 "uk", // United Kingdom
476 "um", // United States Minor Outlying Islands
477 "us", // United States of America
478 "uy", // Uruguay
479 "uz", // Uzbekistan
480 "va", // Vatican City State
481 "vc", // Saint Vincent and the Grenadines
482 "ve", // Venezuela
483 "vg", // British Virgin Islands
484 "vi", // U.S. Virgin Islands
485 "vn", // Vietnam
486 "vu", // Vanuatu
487 "wf", // Wallis and Futuna
488 "ws", // Samoa (formerly Western Samoa)
489 "ye", // Yemen
490 "yt", // Mayotte
491 "yu", // Serbia and Montenegro
492 "za", // South Africa
```

```
$_cctld = array(
    'ac',
    'ad','ae','af','ag',
    'ai','al','am','an',
    'ao','aq','ar','as',
    'at','au','aw','ax',
    'az','ba','bb','bd',
    'be','bf','bg','bh',
    'bi','bj','bm','bn',
    'bo','br','bs','bt',
    'bu','bv','bw','by',
    'bz','ca','cc','cd',
    'cf','cg','ch','ci',
    'ck','cl','cm','cn',
    'co','cr','cs','cu',
    'cv','cy','cz',
    'de','dk','dm',
```

```
$_gtld = array(
    'aero',
    'biz',
    'cat',
    'com',
    'coop',
    'edu',
    'gov',
    'info',
    'int',
    'jobs',
    'mil',
    'mobi',
    'museum',
    'name',
    'net',
    'org',
    'pro',
    'travel',
    'asia',
    'post',
    'tel',
    'geo',
)
```

.geo

Czechoslovakia?

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 exact. A very similar regular expression, unless the first \b with A and the last one with {2,4} can be used to

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.

U-label

例え.テスト



xn--r8jz45g.xn--zckzah

A-label

A large, faint, light gray globe is centered in the background of the slide. The globe shows latitude and longitude lines.

What's been done so far?

Activities to Date

- SSAC Recommendations
- IAB RFC3696 “Application Techniques for Checking and Transformation of Names”
 - ICANN created discussion forum and dedicated webpage:
<http://www.icann.org/en/resources/tld-acceptance>
 - Posted TLD verification tool on github: github.com/icann
 - Technical recommendations and tools
 - JIG WG Initial report on Universal Acceptance of IDN TLDs
 - Consultations with impacted parties
 - Round table in Costa Rica



What's in the works

ICANN tasks

- Out reach campaign
- Improve TLD verification libraries
- Continuing work on informational and educational materials

Your tasks

- Check your software — do all your applications properly support all domains?
- Inform and educate vendors and others
- Send us feedback and suggestions at: tld-acceptance@icann.org

The background is a dark blue gradient with abstract, overlapping geometric shapes in various shades of blue. A thin, bright red curved line starts near the top left and arcs across the upper portion of the image. The overall aesthetic is modern and professional.

Thank You

One World

One Internet

Questions