

# Universal Acceptance of all TLDs

*Working session*  
*17 October 2012*



# Universal Acceptance of all TLDs

- Gervase Markham - Mozilla
- Jordyn Buchanan - Google
- Xiantang Sun - CNNIC
- Edmon Chung - DotAsia



# Universal Acceptance of all TLDs

## Agenda:

- Introduction
- Overview of the Project
- Speakers and Presentations
- Questions and Discussion



# Universal Acceptance of all TLDs

On-going effort at ICANN with the goal to raise awareness about the diversity of the domains (gTLDs and ccTLDs, ASCII and IDN):

<http://www.icann.org/en/resources/tld-acceptance>

Covers acceptability issues due to certain constraints as implemented in software

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



# Why it is important

The DNS is evolving and continues to grow - hundreds of new TLDs are expected to be added in the near future

How to minimize the compatibility issues in software on the Internet and ensure that

- Users' emails are working
- URLs are recognized as such in browsers



# Acceptability issues - Examples

**Permanent Home Address Line 1\*:**

**Permanent Home Address Line 2:**

**City\*:**

**Zip Code\*:**  -

**State\*:**

**SSN\*:**  -  -

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

**Mother's Maiden Name\*:**

**E-mail Address:**  @  .

Note: You must be a U.S. resident  
No P.O.  
You must be 18 or older, 19 in Al  
be cons

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



# 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 St
481 "vc", // Saint Vincent a
482 "ve", // Venezuela
483 "vg", // British Virgin
484 "vi", // U.S. Virgin Isl
485 "vn", // Vietnam
486 "vu", // Vanuatu
487 "wf", // Wallis and Futu
488 "ws", // Samoa (formerly
489 "ye", // Yemen
490 "yt", // Mayotte
491 "yu", // Serbia and Mont
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 (change the first `\b` with `^` and the last one with `$`) can be used to

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





# Examples of Causes of some Acceptability issues

- Improper logic in software for checking valid domains
- Lack of IDNA support
- Old software that is not yet upgraded



# Activities to date...

- Created discussion forum and dedicated webpage: <http://www.icann.org/en/resources/tld-acceptance>
- Posted proof-of-concept TLD verification tool at: <https://github.com/icann>
- Consultations with ICANN stakeholders
- Registries and Registrars activities
- JIG WG
- Technical recommendations
- Outreach campaign



# What can you do?

- Check your software – do all your applications properly support all domains?
- Inform and educate software developers and others
- Contact us at: [tld-acceptance@icann.org](mailto:tld-acceptance@icann.org)



# What we are working on now

- Outreach campaign
- Improving TLD verification libraries
- Informational and educational materials
- Your suggestions?



# Universal Acceptance of all TLDs

## Gervase Markham



# Universal Acceptance of all TLDs

**Jordyn Buchanan**



# Universal Acceptance of all TLDs

## Xiantang Sun





# Universal Acceptance of all TLDs

Edmon Chung



# Thank You



# *Questions*

