Universal Acceptance of All TLDs

Round table discussion 14 March 2012



Agenda

- Overview
- Examples
- Past work
- Discussion



The Issue



Internet Software has compatibility problems as it checks user input against expected behavior



ICANN's Role

- Limited technical coordination
- Collaboration with ICANN stakeholders
- Raising awareness inside and outside ICANN community



Not Covered In This Session

• What should or should not be added to the root zone in the future

 Policy aspects on whether access to a certain TLD should be restricted



Acceptability Issues Example

http://example.com	0
http://example.xxx	1:33 PM
http://япон.рф	1:34 PM
http://example.XNP1Al	1:34 PM





Acceptability Issues Example



Examples of Causes

Improper domain checking logic

Browsers are not upgraded



Example of Hard-Coded List

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	"уц", //	Serbia and Montenegro (originally Yugoslavia)
492	"za", //	South Africa



Example of Hard-Coded List

<pre>\$_cctld = array(</pre>
'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','cx','cy','cz',
'de','dj','dk','dm',



Example of Hard-Coded List

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

[line 108]

Generic top-level domain

This is an array of the official generic top-level domains.



Example of String Length Check

But you can do much more with regular expressions. In a text editor like <u>EditPad Pro</u> or a specialized text processing tool like <u>PowerGREP</u>, 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





Activities to Date

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 to Date: 2004 to Now

- ICANN created discussion forum and dedicated webpage
- Prepared technical recommendations
 - Posted TLD verification tool at: <u>https://github.com/icann</u>



Technical Recommendation

- 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-todate, 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)

TLD Verification Code

Public Repositories (5)

Find a repository		No public memb
All Repositories	Sources Forks Mirrors	
uniaccept-python	Python 💿 3 👍 2	
Universal Acceptance Toolkit for Python Last updated 7 days ago		
■ all commits ■ commits by owner	52 week participation	
uniaccept-java	Java ⊚ 1 🛱 1	
Universal Acceptance Toolkit for Java Last updated 19 days ago		
■ all commits ■ commits by owner	52 week participation	
uniaccept-c	C ⊚ 2	
Universal Acceptance Toolkit for C		

Organization Members (0)

Draft outreach materials

Collateral Proposal

Existing Project Pages

+ Shttp://www.karn.org/en/top	ICANN Universa ICs/TLD-acceptance/	Acceptance of All Top-I	evel Domains	fleader	¢ Qr Google		
Site Map Site Index I	Quick Links Select a link below:		• Sea	sch 🗌		Q,	
		<u>س</u> ا					
Home About News	Policy In Focus Meeti	ngs Resources	Documents	Press Room	Careers	Contact	
Comparison of the The-Level Density of the Comparison of the The-Level Density Comparison of the The-Level Density of the Comparison of the Compar							
Universal Acceptance of All	In order for the full resources of the make use of the complete range of	Internet to be globally top-level domains (TL	available for all i Ds).	users, service and a	pplication pro	viders must	
Announcements	A current list of all top-level domains that have been delegated within the authoritative root-server system is available here. This list is maintained by the UANA and provides a regularity-updated index of TLDs that currently exist in the root zone.					available t in the root	
Levil Commins UANA Reports (Ch-2: A Unique, Authoritative Root for the ONS Respire the Internet A Relative Globel Public Resource: Response to New.cat.Picity-Paper PLO-Acceptance Discussion Forcem TuD-Verification Tool Wave universe Interplatment	Rejection from TLD anting data to addated integli parameters or other emotional formating utilities can be avoided parameters and automatical emotional to Separatification (See Monares J) future that that the sector of a parameters for the sector of a sector of the sector of a sector of the sec						
Why universal resolvability is important (a non-technical explanation)	ICANIN has issued today a new version of code intended to assist software developers and application providers whose work assists bores in using the DNS. ICANIN Releases Beta TLD Verification Tool						
	Today ICANN released a beta ven developed in response to problem TLDs. These problems occur in so characters; or, 2) they rely on legal valid.	sion Top-Level Domain s reported by gTLD reg me current application by information where or	(TLD) Verification istries and end-u s because: 1) the hily com/het/org a	on Tool. This verific isers of the non-aco y do not recognize a nd a handful of ccTl	ation tool has eptance of so any TLD of m LDs are recog	been ne existing ore than three nized as	
	ICANN Creates Area on Univers 20 March 2006	al Acceptance of TLC	8				
	In order for the full resources of the make use of the complete range of ICANN is making available a new	Internet to be availabl top-level domains (TL page of resources rela	a to all users glot Ds). To promote led to this topic.	cally, service and ap accessibility of up-to	plication prov o-date TLD int	riders must formation,	

New Dedicated Microsite



New Fact Sheet



Activities to Date: 2004 to Now

- JIG WG published Initial Report on Universal Acceptance of IDN TLDs
- Consultation with impacted parties





Addressing the Problem as a Community Effort

Comments... Suggestions...

tld-acceptance@icann.org



Thank You



Discussion Points

- 1. What are the existing issues?
- 2. Who should be addressing the existing issues?
- 3. How can ICANN promote Universal Acceptance of all domains effectively?

