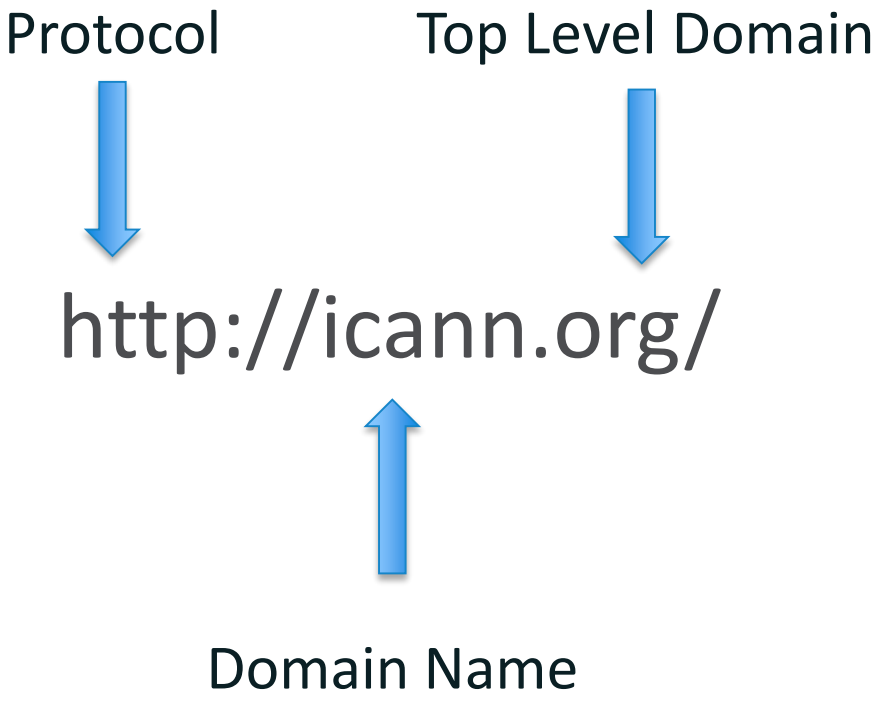
Top Level Domains

Baher Esmat | MEAC-SIG 2016 | 8-12 August 2016

What is a Domain Name?

http://www.youtube.com/watch?v=2ZUQ2Szu-JI

Parts of a Domain Name



Hosts.txt

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HOST : 192.5.12.22 : UTAH-GR : VAX-11/750 : UNIX : TCP/TELNET,TCP/FTP,TCP/SMTP :
HOST : 192.5.89.22 : UT-ICV2 : VAX-11/780 : VMS : TCP/TELNET,TCP/SMTP,TCP/FTP,UDP,ICMP :
HOST : 192.12.5.22 : SRI-WHITNEY : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.5.8.23 : UW-OAHU,OAHU : SUN-120 : UNIX : TCP/TELNET,TCP/FTP,TCP/SMTP :
HOST : 192.5.12.23 : UTAH-SP : VAX-11/750 : UNIX : TCP/TELNET,TCP/FTP,TCP/SMTP :
HOST : 192.5.89.23 : UT-ICV3 : VAX-11/780 : VMS : TCP/TELNET,TCP/SMTP,TCP/FTP,UDP,ICMP :
HOST : 192.12.5.23 : SRI-PINCUSHION,PINCUSHION : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.5.2.24, 192.5.58.8 : WISCVM,WISC-IBM : IBM-4341 : VM/CMS : TCP/TELNET,TCP/FTP,TCP/SMTP,ICMP :
HOST : 192.5.12.24 : UTAH-UG : VAX-11/750 : UNIX : TCP/FTP,TCP/SMTP,TCP/TELNET :
HOST : 192.12.5.24 : SRI-FORESTER,FORESTER : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.5.12.25 : UTAH-ORION : VAX-11/750 : UNIX : TCP/FTP,TCP/SMTP,TCP/TELNET :
HOST : 192.12.5.25 : SRI-KIOWA,KIOWA : SYMBOLICS-3670 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.5.89.26 : UT-DNX : VAX-11/780 : VMS : TCP/TELNET,TCP/SMTP,TCP/FTP,UDP,ICMP :
HOST : 192.12.5.26 : SRI-JUNIPER,JUNIPER : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.5.89.27 : UT-UV : MICROVAX-I : VMS : TCP/TELNET,TCP/SMTP,TCP/FTP,UDP,ICMP :
HOST : 192.12.5.27 : SRI-KEARSARGE,KEARSARGE : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.10.41.30 : SCRC-PERN,PERN : SUN-120 : UNIX : TCP/FTP,TCP/TELNET,TCP/SMTP,UDP :
HOST : 192.12.5.30 : SRI-NEWCOMB,NEWCOMB : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.5.89.31 : UT-A20,A20 : DEC-2060 : TOPS20 : TCP/TELNET,TCP/SMTP,TCP/FTP :
HOST : 192.12.5.31 : SRI-OLMSTEAD,OLMSTEAD : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.12.5.32 : SRI-QUAIL,QUAIL : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.12.5.33 : SRI-SONORA,SONORA : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.5.14.34 : RANDGR,RAND-GR : VAX-11/750 : UNIX : TCP/TELNET,TCP/FTP,TCP/SMTP :
HOST : 192.12.5.34 : SRI-VOGELSANG,VOGELSANG : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.12.5.35 : SRI-YOSEMITE,YOSEMITE : SYMBOLICS-3600 : LISPM : TCP/SMTP,TCP/TELNET,TCP/FTP,TCP/FINGER,TCP/TIME,UDP/TIME,UDP/TFTP,UDP/FINGER :
HOST : 192.5.89.39 : UT-A3081,UT-IBM : IBM-3081 : VM/CMS : TCP/TELNET,TCP/FTP :
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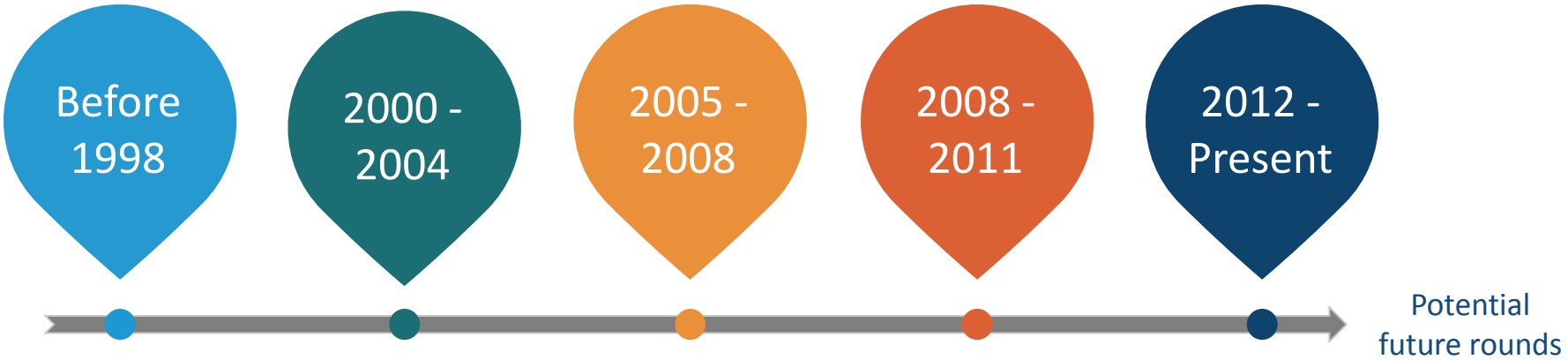
Early Domains

Rank	Date of registration	Domain	Registered to
1	March 15, 1985	symbolics.com	Symbolics
2	April 24, 1985	bbn.com	BBN Technologies
3	May 24, 1985	think.com	Thinking Machines
4	July 11, 1985	mcc.com	Microelectronics and Computer Technology Corporation
5	September 30, 1985	dec.com	Digital Equipment Corporation
6	November 7, 1985	northrop.com	Northrop Corporation
7	January 9, 1986	xerox.com	Xerox
8	January 17, 1986	sri.com	SRI International
9	March 3, 1986	hp.com	Hewlett-Packard
10	March 5, 1986	bellcore.com	Bell Communications Research
11	March 19, 1986	ibm.com	International Business Machines
11	March 19, 1986	sun.com	Sun Microsystems
13	March 25, 1986	intel.com	Intel
13	March 25, 1986	ti.com	Texas Instruments
15	April 25, 1986	att.com	AT&T

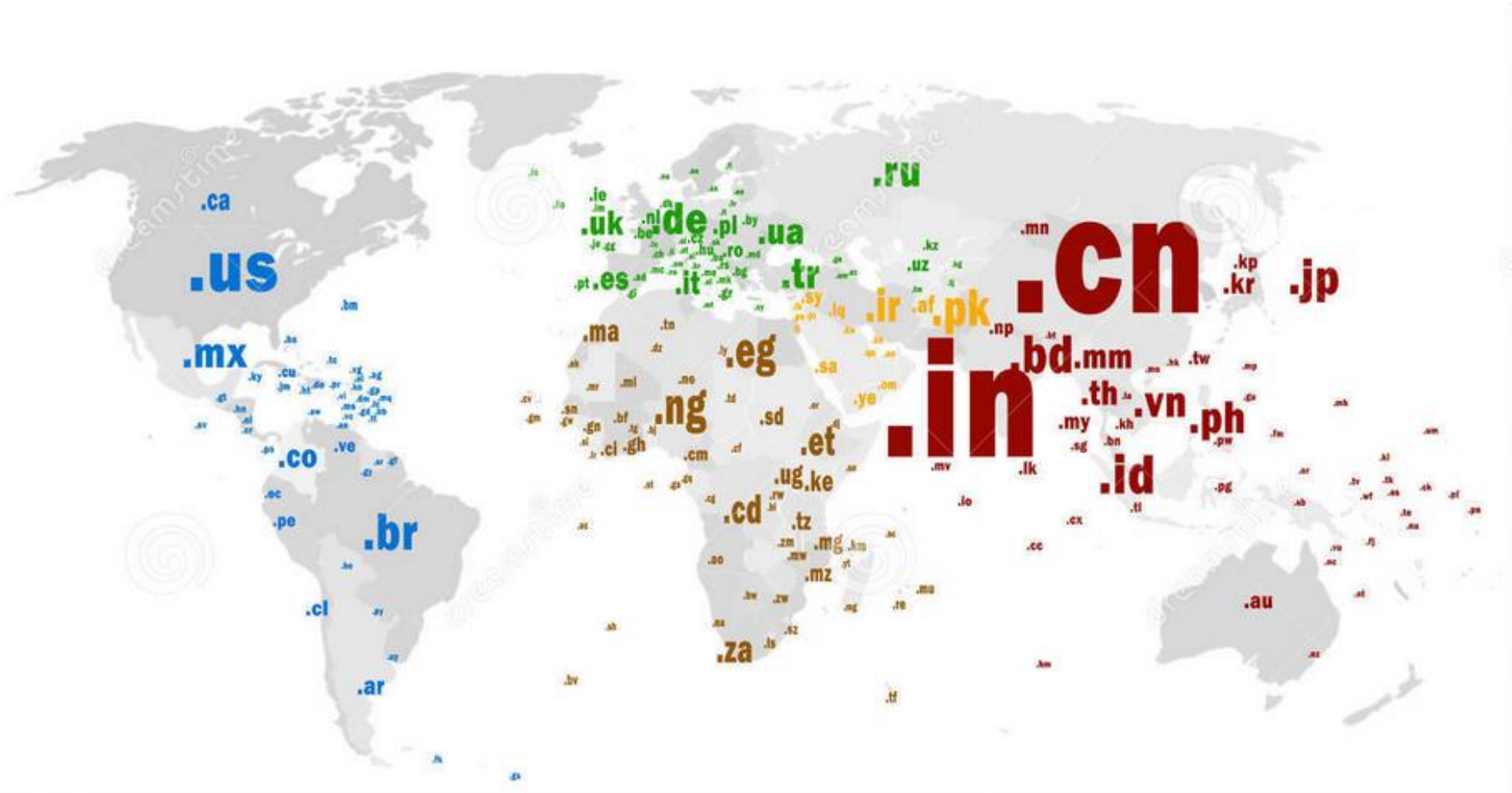
Source: https://en.wikipedia.org/wiki/List_of_the_oldest_currently_registered_Internet_domain_names

Evolution of Generic TLDs (gTLD)



Before 1998	2000 - 2004	2005 - 2008	2008 - 2011	2012 - Present
8 gTLDs pre-date ICANN's creation	2 previous rounds of new gTLDs	Policy Development Process	Policy Implementation (Design)	New gTLD program launched
.com .edu .gov .int .mil .net .org .arpa	(2000) .aero .biz .coop .info .museum .name .pro (2004) .asia .cat .jobs .mobi .post .tel .xxx .travel	Introduction of new gTLDs: Principles, Recommendations and Implementation Guidelines	Development of the New gTLD Applicant Guidebook	Evaluation, Delegation and Launch of new gTLDs

Country Code TLDs (ccTLD)

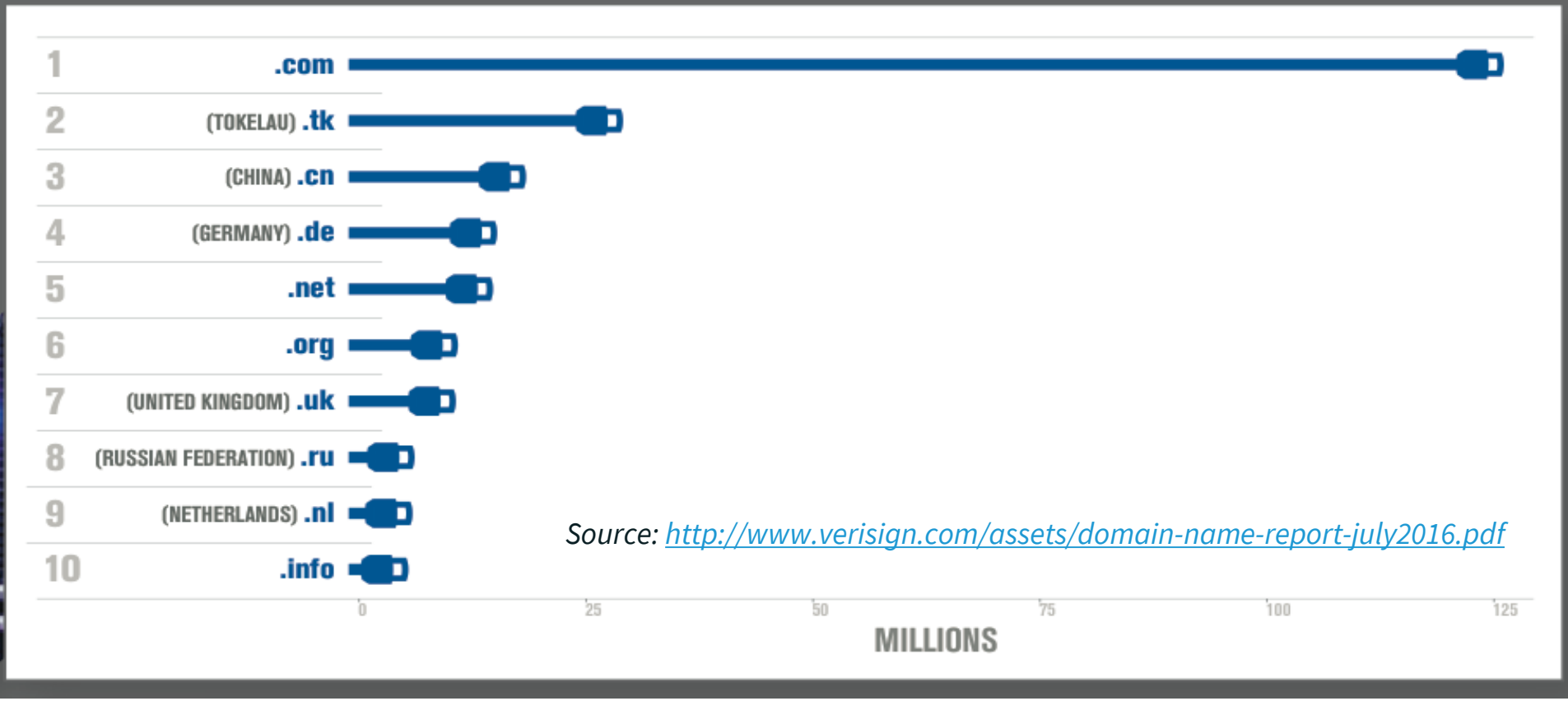


Source: http://dreamstime.com/

The ISO-3166 List

- The ISO-3166 provides 2-letter codes and 3-letter codes of countries or a grouping of countries
- 249 assigned 2-letter codes
  - According to the UN, the world has 196 countries
- More at https://www.iso.org/obp/ui/#search

Largest TLDs by Zone Size



Source: http://www.verisign.com/assets/domain-name-report-july2016.pdf

Largest ccTLDs in MEAC Region

IR		Institute for Research in Fundamental Sciences	769,025
TR		Middle East Technical University	382,044
AE		Telecommunication Regulatory Authority	190,209
PK		PKNIC	~100,000
MA		Agence Nationale de Réglementation des Télécommunications	60,825
SA		Communications and Information Technology Commission	41,328
SO		Ministry of Post and Telecommunications	~40,000
TN		Tunisia Internet	33,010

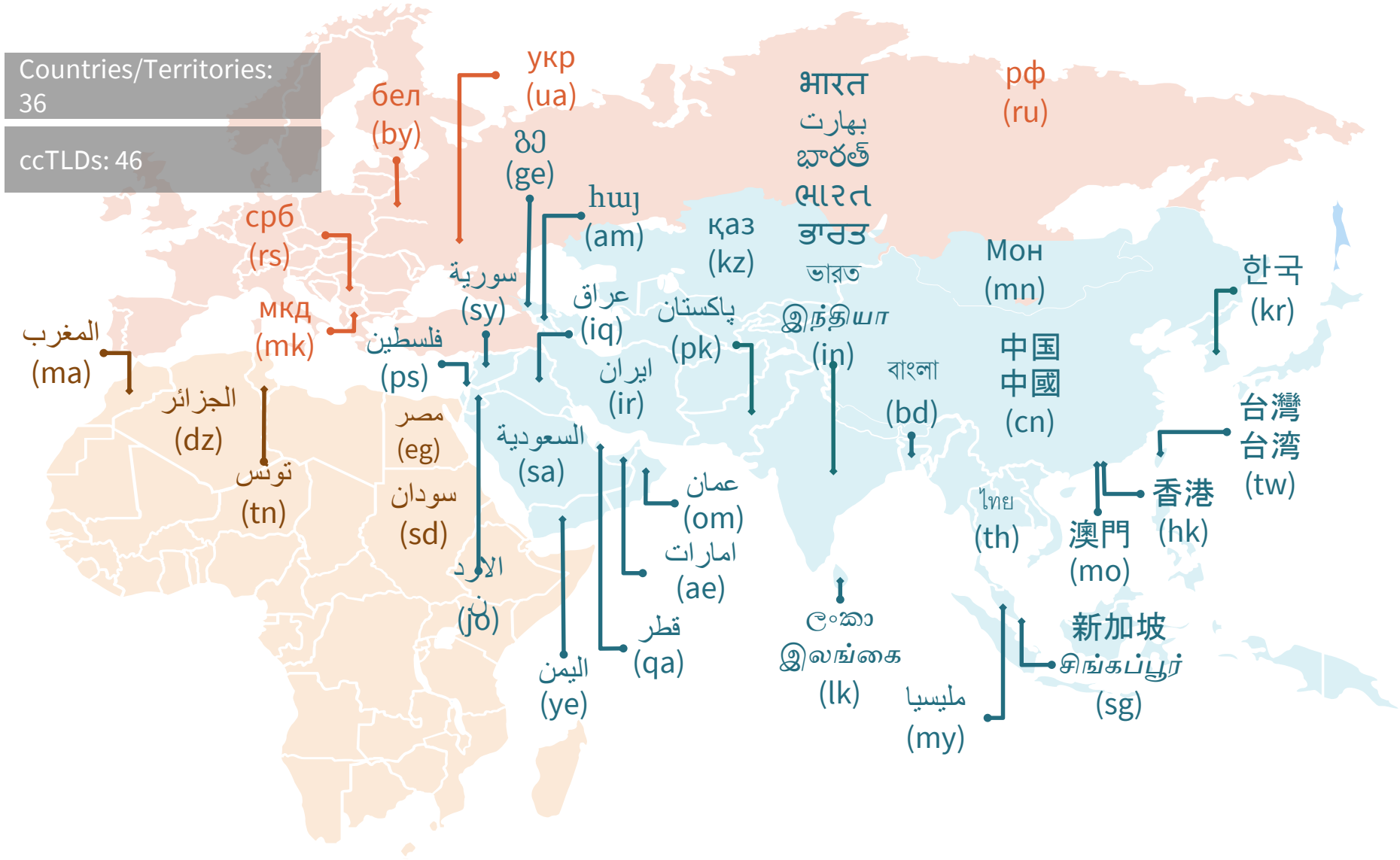
Internationalized Domain Names (IDNs)

- Lots of community work undertaken since 2000
- Groups who came together to work on this included:
  - Arabic Script
  - CJK (Chinese, Japanese, and Korean)
  - Cyrillic
  - Greek
  - Latin
  - Neo-Brahmi
  - … and many others

IDN ccTLD Fast Track Process

- Years of policy development before being announced on October 31, 2009 at the end of the ICANN Seoul meeting
- Restricted to countries willing to register their ccTLD in their local language
  - Restricted to non-Latin languages
- Goes through two phases; String Evaluation and then Delegation
- Needs consensus from local communities on who should operate it
- More than 26 delegations so far with 13 in Arabic, 1 in Farsi, and 2 in Urdu
- First 4 delegations were مصر., امارات., السعودية.. and .Pф
- More at https://www.icann.org/resources/pages/string-evaluation-completion-2014-02-19-en

IDN Country Code Top-Level Domains



The New gTLD Program

Internet New Extensions

Source: https://newgtlds.icann.org/

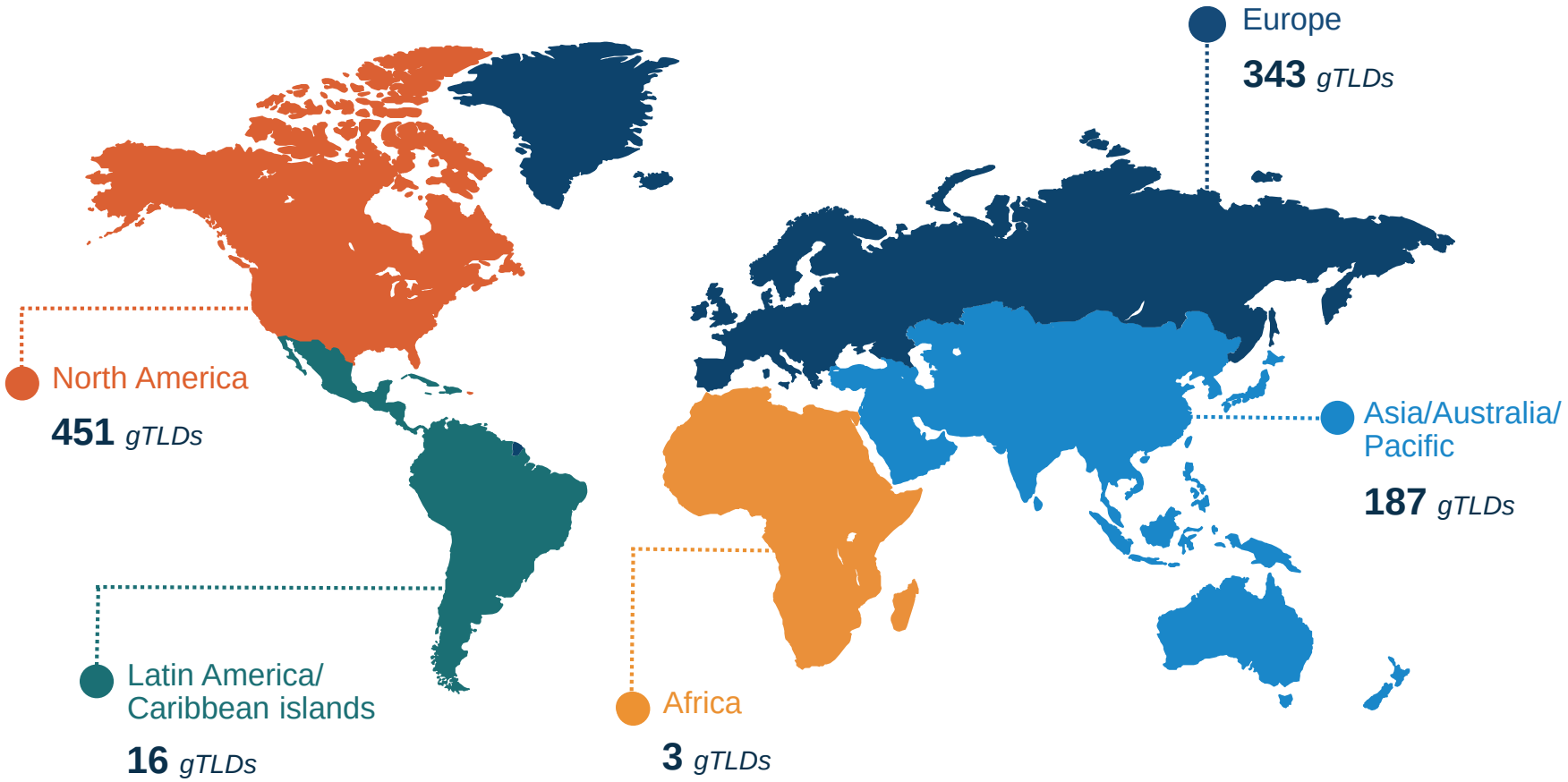
Where Do Things Stand?

- 1930 applications
- 1300+ potential TLDs delegated by 2017
- 1129 new gTLDs delegated
- 87 Internationalized Domain Name gTLDs have been delegated

As of 1 August 2016

2012 Round Delegated gTLDs by ICANN Region

1000 New gTLDs



As of 25 May 2016

New gTLD Statistics

	TLD	Domains	% Share
1.	GA .xyz	6,443,524	27.92%
2.	GA .top	3,051,667	13.22%
3.	GA .wang	1,065,508	4.62%
4.	GA .win	993,251	4.30%
5.	GA .club	809,467	3.51%
6.	GA .site	454,350	1.97%
7.	GA .vip	440,499	1.91%
8.	GA .link	404,184	1.75%
9.	GA .bid	391,035	1.69%
10.	GA .online	353,837	1.53%

Source: https://ntldstats.com

The New Landscape

https://www.youtube.com/watch?v=1kFcxf8KAjg

Universal Acceptance of TLDs

All domain names should be treated equally.

Including:

пример.рф	site.example	名称@网站.域名
Internationalized Domain Names	New gTLDs	Internationalized Email Addresses

Why it Matters

Required for multilingual Internet

Enables next billion users

Crucial to new gTLDs

Get Involved

Universal Acceptance Steering Group

Helping software developers and website owners understand how to update their systems.

?

Learn more at http://uasg.tech

Questions?!

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