



# What are IDNs and what does it mean to you?

In collaboration with the APRALO Capacity Building Webinar Series

9 April 2015

# Webinar Information - Agenda

## Introduction by Jia-Rong

- APAC Webinar (Second Thursday Bi-monthly)

## Remarks by Siranush, APRALO Chair

## Presentation by Sarmad

- What are Internationalized Domain Names?
- IDN Work at ICANN
- Why and how you can get involved

## Sharing by APRALO representative Edmon

- What does IDN mean to you?
- IDN from the Label Generation Ruleset (LGR) panel perspective

## Q&A

# Webinar Information

**Dial-in Numbers:** <http://tinyurl.com/APACdial-in>

**Conference ID: 645 127 3995**

In order to ask a question, you will either have to dial into the audio bridge (dial in details above) or type it in the Adobe Connect chat.

## **Q&A Session after the presentation:**

- Questions submitted to ICANN prior to the webinar given priority
- Questions will be answered as time permits

**Recordings & slides available after the webinar:**

<http://tinyurl.com/APACWebinars>

# Questions & Answers

## **Questions will be answered as time permits**

- Questions not answered during the session will be posted on wiki page

## **Adobe Connect questions**

- Send your question via the Q&A Pod

## **Phone questions**

- Dial \*6 (star six) to unmute the line

## **Recordings & slides available after the webinar**

- <http://tinyurl.com/APACWebinars>

## **Post-webinar survey**

- <https://www.surveymonkey.com/s/Webinar-9April2015>

A world map composed of a network of white dots and lines on an orange background. The dots represent nodes and the lines represent connections, forming a complex web that outlines the continents.

Introduction to APRALO Capacity Building Webinar Series  
by Siranush Vardanyan  
APRALO Chair



# IDN Program @ ICANN

Sarmad Hussain | IDN Program Sr. Manager | 9 April 2015

# Agenda

- ⦿ **What are Internationalized Domain Names (IDNs)?**
- ⦿ **IDN work at ICANN**
- ⦿ **Why and how you can get involved**



# What are Internationalized Domain Names (IDNs)?



# ASCII Domain Name Label

**www.cafe.com**

The diagram shows the domain 'www.cafe.com' with three blue curly braces underneath. The first brace is under 'www', the second is under 'cafe', and the third is under 'com'. Below each brace is a label: 'Third Level Domain' under 'www', 'Second Level Domain' under 'cafe', and 'Top Level Domain (TLD)' under 'com'. A second set of blue curly braces is positioned below the first set, with the first brace spanning from the start of 'www' to the end of 'cafe', and the second brace spanning from the start of 'com' to the end of 'com'.

Third Level  
Domain

Second Level  
Domain

Top Level  
Domain (TLD)

## Forming ASCII Labels

### Use LDH

- Letters [a-z]
- Digits [0-9]
- Hyphen (LDH)

Label length = 63

Other constraints (e.g. on hyphen)

## Forming ASCII Labels

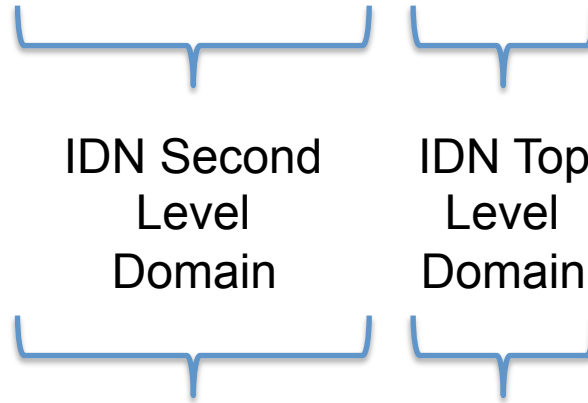
### Use only Letters

- Letters [a-z]

Label length = 63

# Internationalized Domain Name (IDN) Labels

ตัวอย่าง-ไทย



বাংলা

Бел

الجزائر

ഭാരതം

中国

ਭਾਰਤ

భారత్

한국

대한민국

## Syntax of IDN Labels

**Valid U-Label:** Unicode code points as constrained by IDNA2008

**Valid A-Label - “xn--”** followed by punycode of U-Label of length 59

## Syntax of IDN Labels

**Valid U-Label,** further constrained by **the “letter” principle** for TLDs

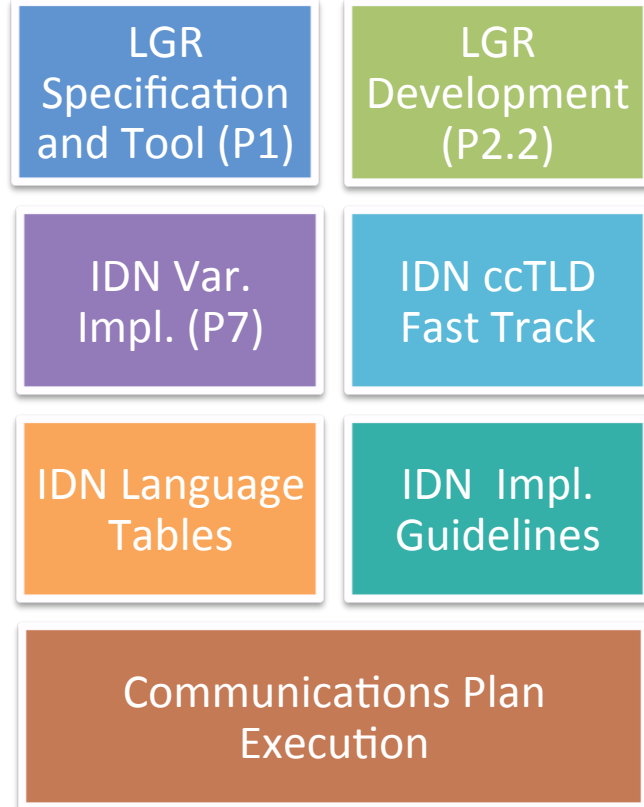
**Valid A-Label**



# **IDN Work at ICANN**

# IDN Program @ ICANN

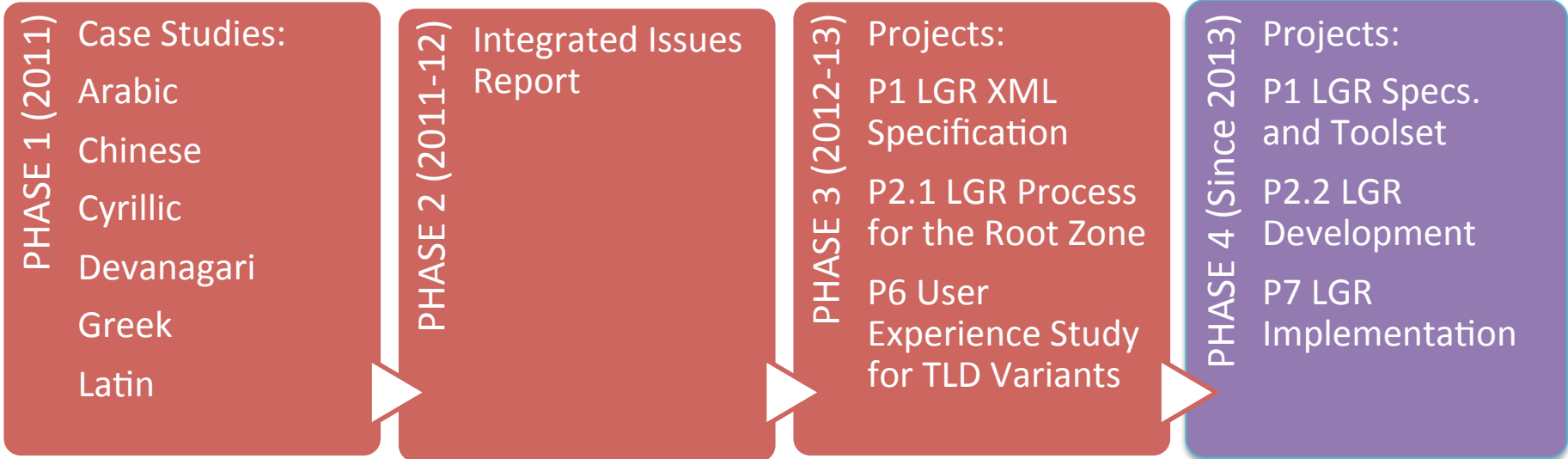
- ◉ IDNs at Top Level
  - ◉ IDN TLD Program
    - ◉ Label Generation Ruleset (LGR)
    - ◉ LGR Toolset
    - ◉ IDN Variant Implementation
  - ◉ IDN ccTLD Fast Track Process Implementation
- ◉ IDNs at Second Level for gTLDs
  - ◉ IDN Implementation Guidelines
  - ◉ IDN Tables
- ◉ Community Outreach and Involvement





# **IDN TLD Program**

# IDN TLD Program



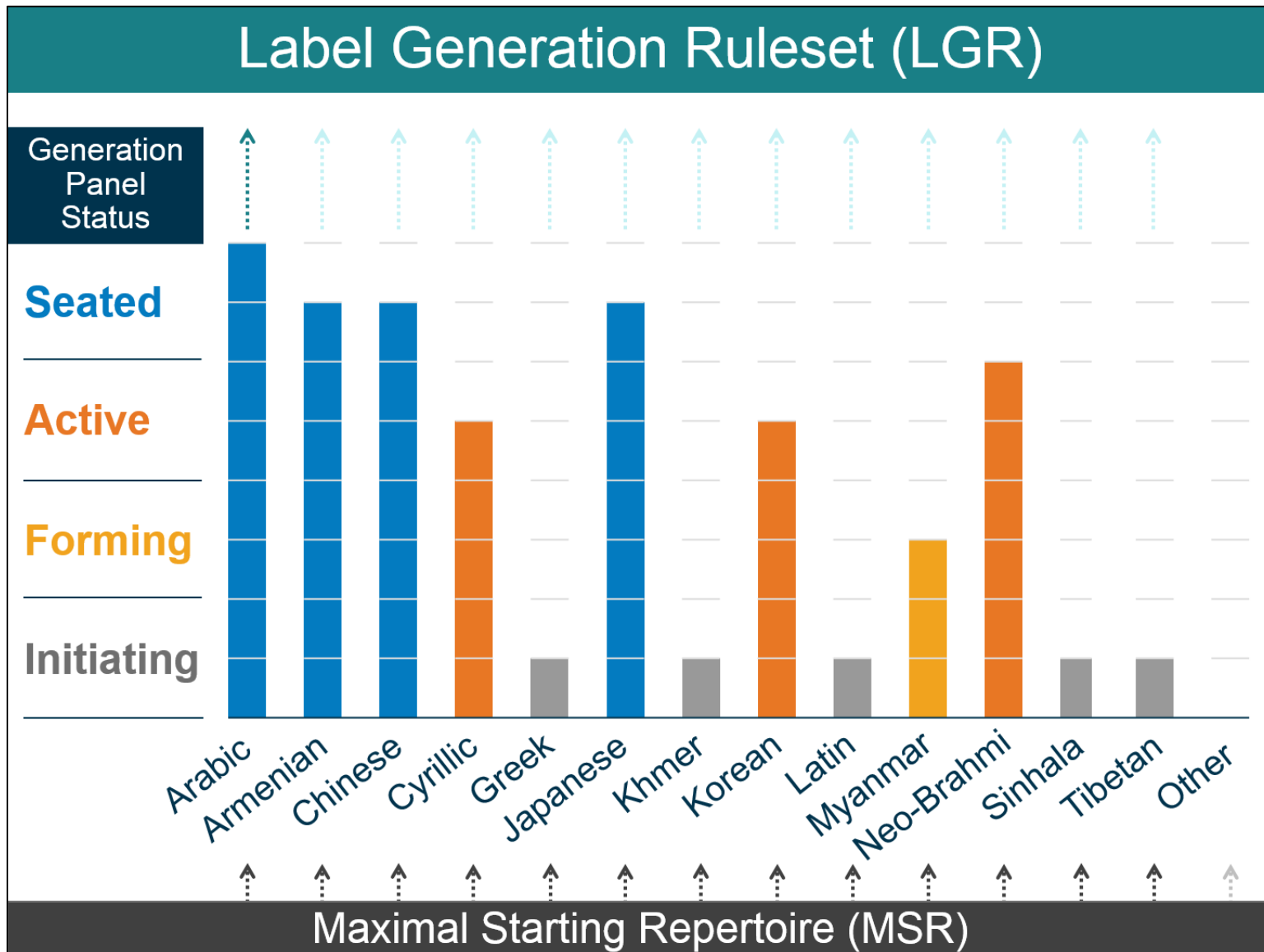
Community agreed to define a Label Generation Rules (LGR)

Reports and documentation of all completed projects available at:  
<https://www.icann.org/resources/pages/reports-2013-04-03-en>

# Label Generation Rules (LGR) for Root Zone

- ⦿ For each script or writing system, for the Root Zone:
  1. Which code points are valid for use?
  2. Are any of these code points variants of each other?
  3. Are there any additional constraints on the labels?
  
- ⦿ For the Root Zone, single “table” containing data for all scripts
  - ⦿ Must be conservative, consistent and secure
  - ⦿ Designed at script level

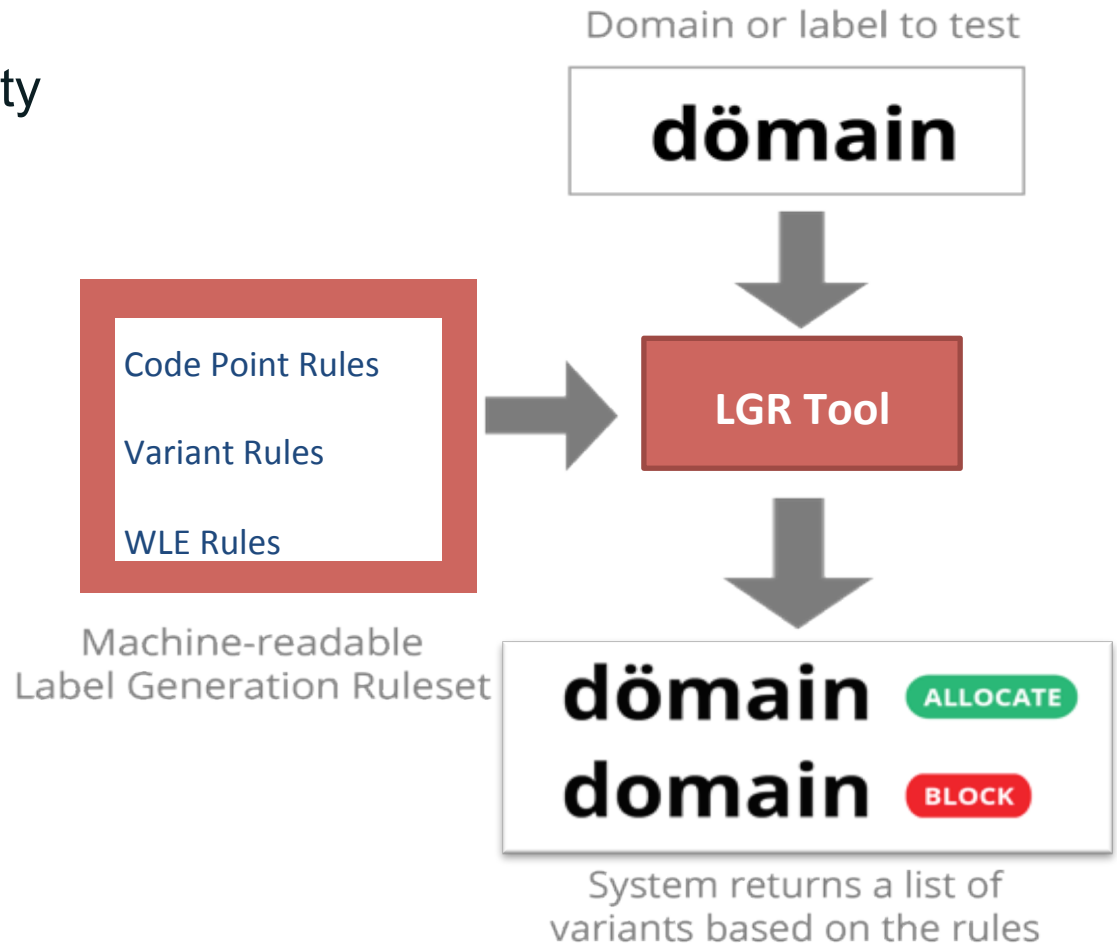
# Root LGR by Generation and Integration Panels





# LGR Specification and Toolset

- LGR machine-readable specifications at <https://datatracker.ietf.org/doc/draft-davies-idntables>
- Toolset functional priority
  - Create LGR
  - Use LGR
  - Manage LGRs
- Open source

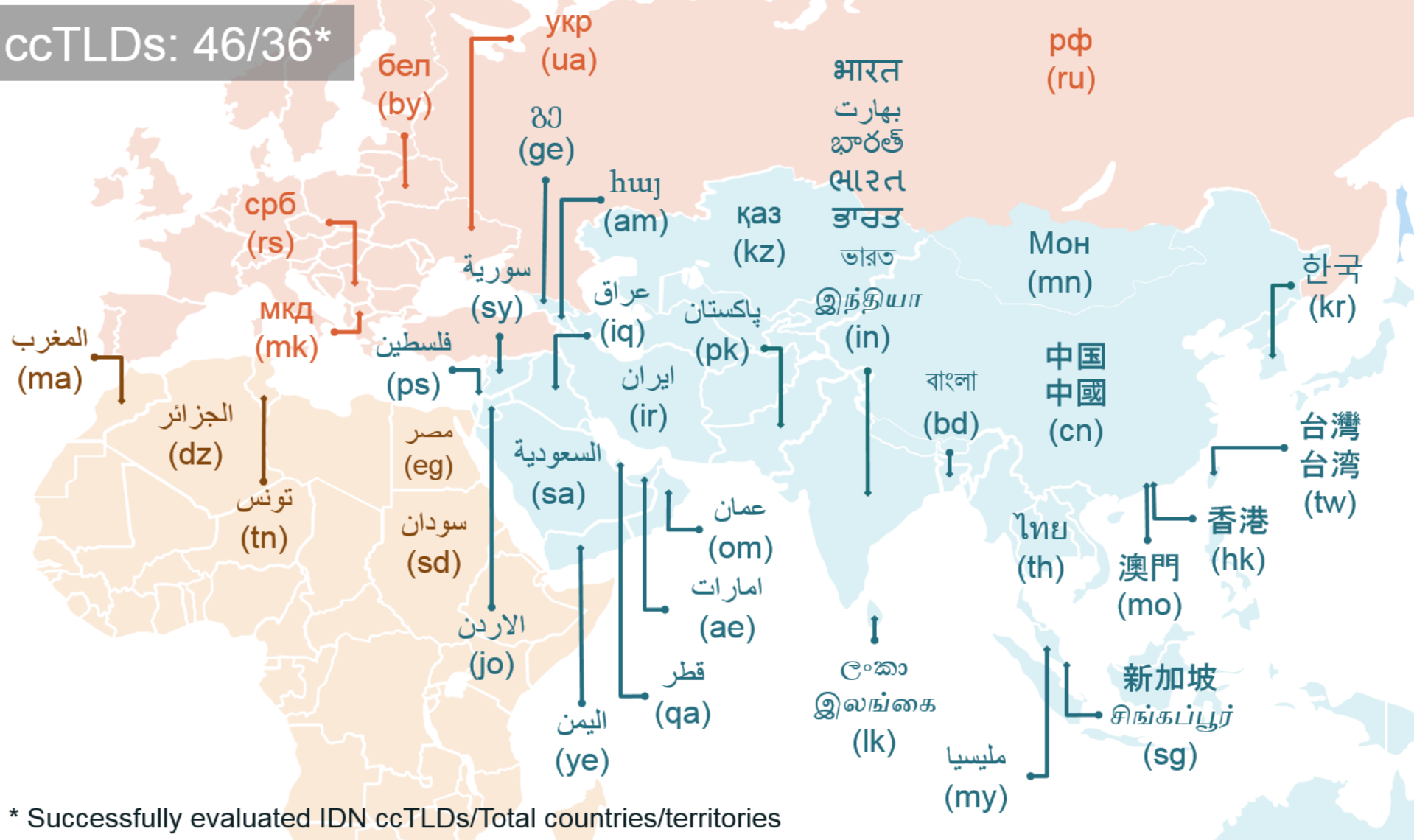




# **IDN ccTLD Fast Track Process Implementation**

# IDN ccTLD Fast Track Process

ccTLDs: 46/36\*



\* Successfully evaluated IDN ccTLDs/Total countries/territories



# **IDNs at Second Level for gTLDs**

# IDN Impl. Guidelines for the Second Level

- ⦿ IDN registration policies and practices at the second level
  - ⦿ Designed to minimize the risk or confusion for the consumer
  - ⦿ Respect the interests of local languages and character sets
- ⦿ Last updated in 2011: [Version 3.0](#)
  - ⦿ New IDN terminology due to IDN Variant TLD projects
  - ⦿ Consistent, machine readable format for language tables
  - ⦿ Updated content: IANA IDNA table with Unicode versions, MSR, LGR
  - ⦿ Additional guidelines: informational RFC 6912, IDN TLD Variants User Experience study
- ⦿ GNSO community at ICANN asked to initiate review
  - ⦿ Current status – initiating next revision

# IDN Tables for the Second Level

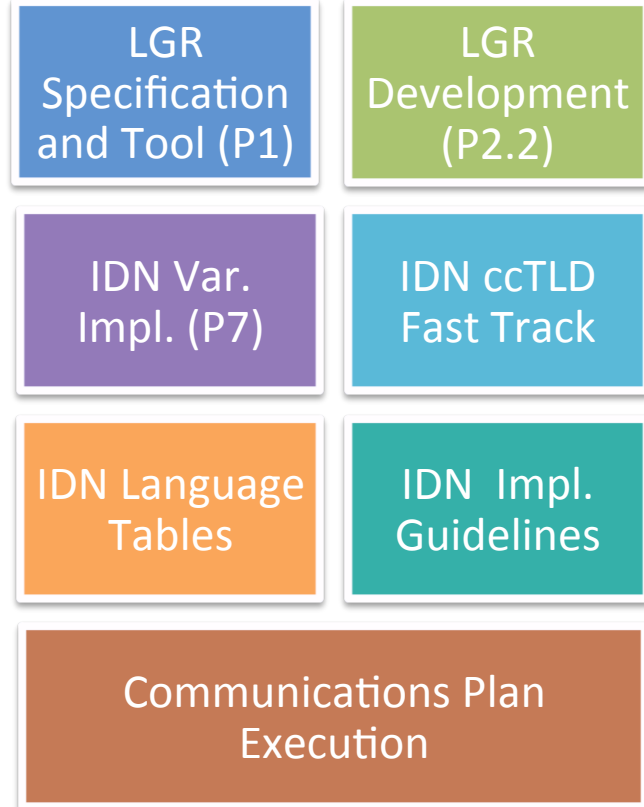
- ⦿ IDN Tables submitted by new gTLDs intending to offer IDNs at second level
  - ⦿ Varied in the character repertoire and contextual rules
- ⦿ Develop reference Label Generation Rulesets (LGRs) for facilitation and consistency in Pre-Delegation Testing (PDT) and the Registry Service Evaluation Process (RSEP)
- ⦿ Promote reuse for secure and consistent end-user experience

# Communication and Outreach Efforts

- ⦿ IDN Program sessions at ICANN meetings
- ⦿ IDN Program updates to SOs/ACs at ICANN meetings
- ⦿ Presentations at meetings
  - ⦿ APTLD, APriIGF, ArabIGF, IGFs, TLDCON, AFRINIC, RIPE NCC
- ⦿ Email communication to SOs/ACs – call to action
- ⦿ Blog for general community:  
<http://blog.apnic.net/2014/09/30/speak-up-for-your-language/>
- ⦿ IDN pages at ICANN Community Wiki and ICANN Website
- ⦿ IDN mailing lists
  - ⦿ {vip, lgr, ArabicGP, ArmenianGP, ChineseGP, ...}@icann.org

# Summary of IDN Program @ ICANN

- ✓ IDNs at Top Level
  - ✓ IDN TLD Program
    - ✓ Label Generation Ruleset (LGR)
    - ✓ LGR Toolset
    - ✓ IDN Variant Implementation
  - ✓ IDN ccTLD Fast Track Process Implementation
- ✓ IDNs at Second Level for gTLDs
  - ✓ IDN Implementation Guidelines
  - ✓ IDN Tables
- ✓ Community Outreach and Involvement





A world map where the continents are defined by a network of white dots and lines, resembling a social or data network. The background is a solid dark blue color.

**Get Involved:  
Speak up for your language**

# How to get involved?

## Volunteer

### **Volunteer for your script Generation Panel (GP)**

To contribute expertise, contribute to the GP for your script. You can get involved by simply emailing your CV and a brief statement of interest to [identlds@icann.org](mailto:identlds@icann.org)

## Review


### **Review work through public comments**

Sign up for the IDN mailing list [vip@icann.org](mailto:vip@icann.org) (to sign up, visit <https://mm.icann.org/listinfo/vip>) and participated in the review of IDN work being done at ICANN through the public comments

## Listen

### **Keep yourself updated**

Attend regular IDN Program Update sessions at ICANN meetings and sign up on the IDN mailing list [vip@icann.org](mailto:vip@icann.org) to get updates on the IDN Program at ICANN



Sharing of IDN from the Label Generation Ruleset (LGR) panel perspective  
by **EDMON CHUNG**  
APRALO Representative and At-Large IDN Policy Working Group Co-Chair

# Useful Links for IDN Program @ ICANN

- To join a Generation Panel for your language, submit CV and statement of interest at: [identlds@icann.org](mailto:identlds@icann.org); Call for Generation Panels: <http://www.icann.org/en/news/announcements/announcement-11jul13-en.htm>
- LGR Document Repository: <https://community.icann.org/display/croscomlgrprocedure/Document+Repository>
- Community Wiki for LGR Project: <https://community.icann.org/display/croscomlgrprocedure/Root+Zone+LGR+Project>
- IDN ccTLD Fast Track Page: <https://www.icann.org/resources/pages/string-evaluation-completion-2014-02-19-en>
- IDN Implementation Guidelines: <https://www.icann.org/resources/pages/implementation-guidelines-2012-02-25-en>

# Engage with ICANN



## Thank You and Questions

Reach us at: Sarmad Hussain or APAC Hub

Email: [sarmad.hussain@icann.org](mailto:sarmad.hussain@icann.org) / [apachub@icann.org](mailto:apachub@icann.org)

Website: [icann.org](http://icann.org)



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[slideshare.net/icannpresentations](https://slideshare.net/icannpresentations)

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Thank you!