ICANN|55

MARRAKECH

5 – 10 MARCH 2016

IDN Program Update

Sarmad Hussain | IDN Program Sr. Manager | 09 March 2016

Overview of Session Presentations

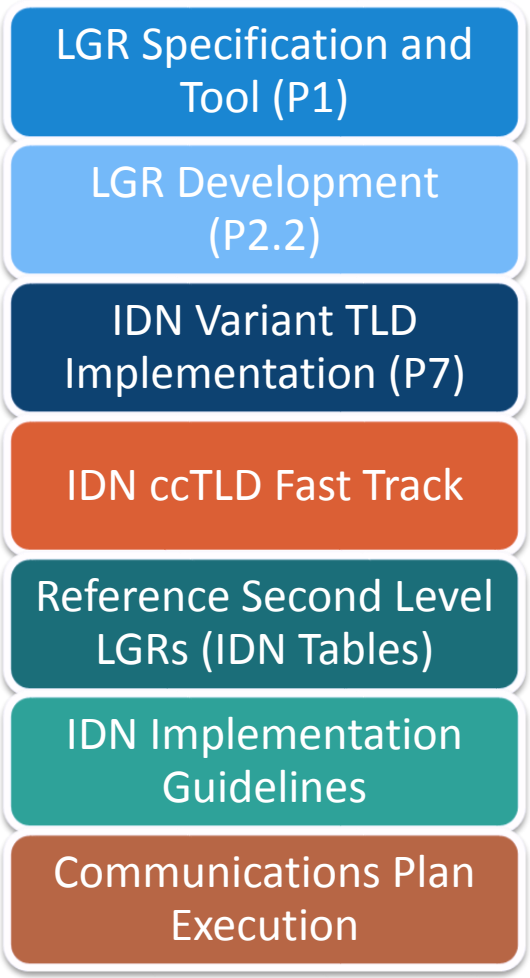
- IDN Program Overview and Progress - Sarmad Hussain
- Update by Integration Panel - Marc Blanchet
- IDN Implementation Guidelines - Edmon Chung
- Reference Second Level LGRs - Michel Suignard
- Community Updates
  - Khmer GP - Rapid Sun
  - Lao GP - Chittaphone Chansylilath
  - Latin GP - Chris Dillon
- Q/A

IDN Overview and Progress

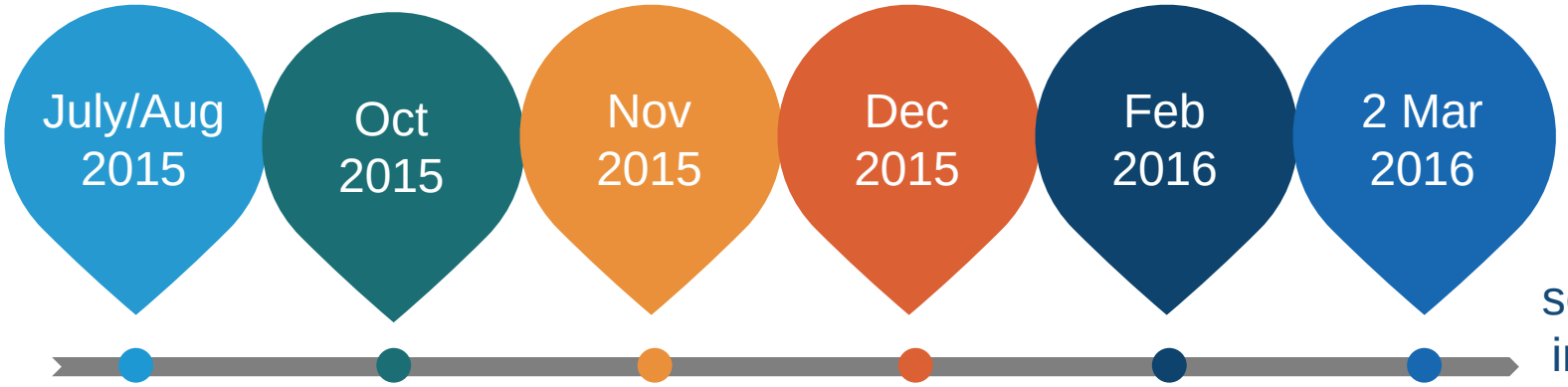
Sarmad Hussain
IDN Program

Overview of Presentation

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



Root Zone Label Generation Rules (LGR)



Armenian/ Arabic Script GPs proposals

PC closed for LGR proposals

Proposals finalized; submitted to IP for evaluation

Evaluation finalized; LGR-1 released for PC

PC closed for LGR-1

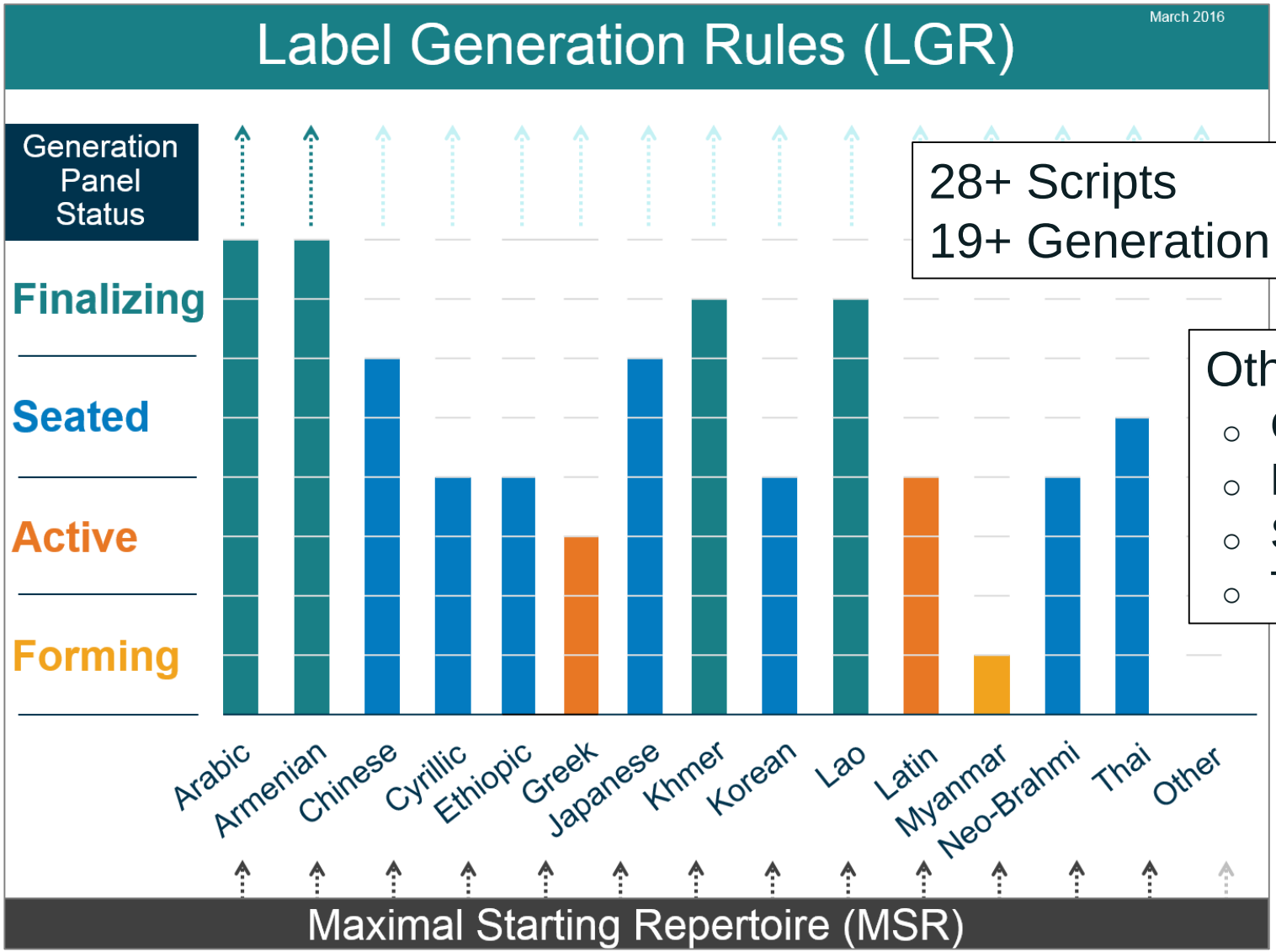
LGR-1 released

Additional scripts will be incorporated in future versions of LGR

LGR version 1 released

- Arabic and Armenian Script GPs submitted LGR proposals
  - Arabic Script LGR Proposal incorporated
  - Armenian Script LGR Proposal successfully evaluated
    - Not integrated due to dependencies on other scripts

Status of LGR Development



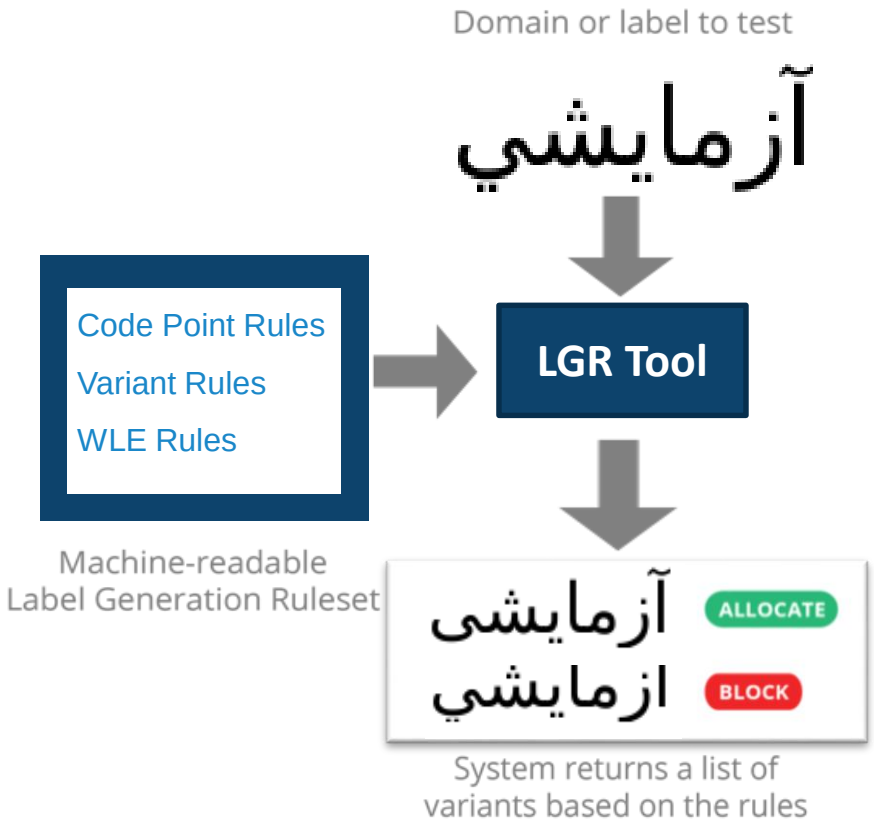
28+ Scripts
19+ Generation Panels

Other:
- Georgian
- Hebrew
- Sinhala
- Thaana

LGR Specification and Tool

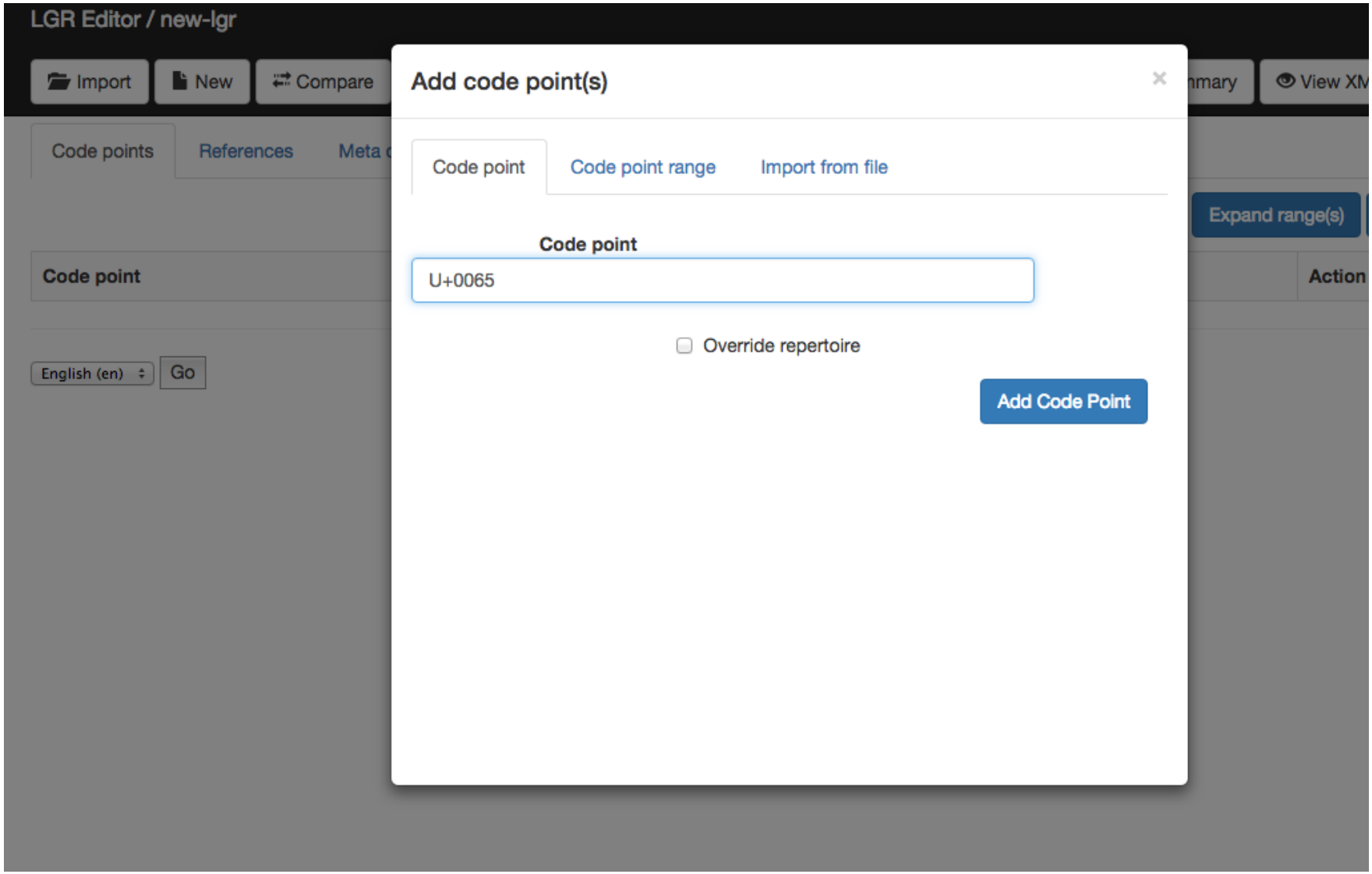
- Specifications (IETF LAGER WG)
  https://tools.ietf.org/html/draft-ietf-lager-specification-08

```
<xml>
        ...
        <char cp="06CC" >
                <var cp="0649" type="blocked" />
                <var cp="064A" type="allocatable" />
        </char>
        ...
</xml>
```

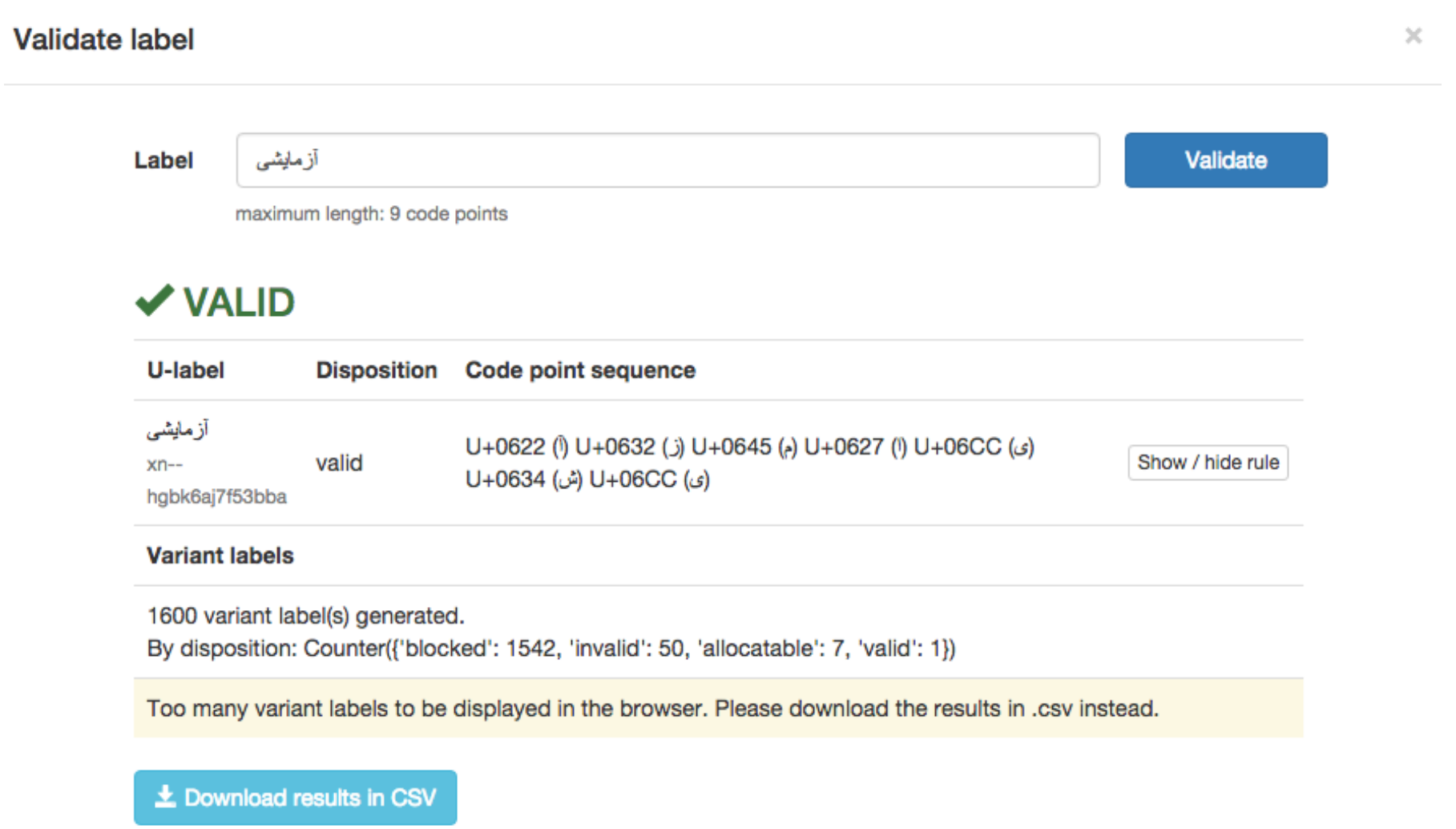


- Tool: https://lgrtool.icann.org
  - Create LGR – available
  - Use LGR – available
  - Manage LGRs – available
  - Label collision – 05/2016
  - Open source – 06/2016

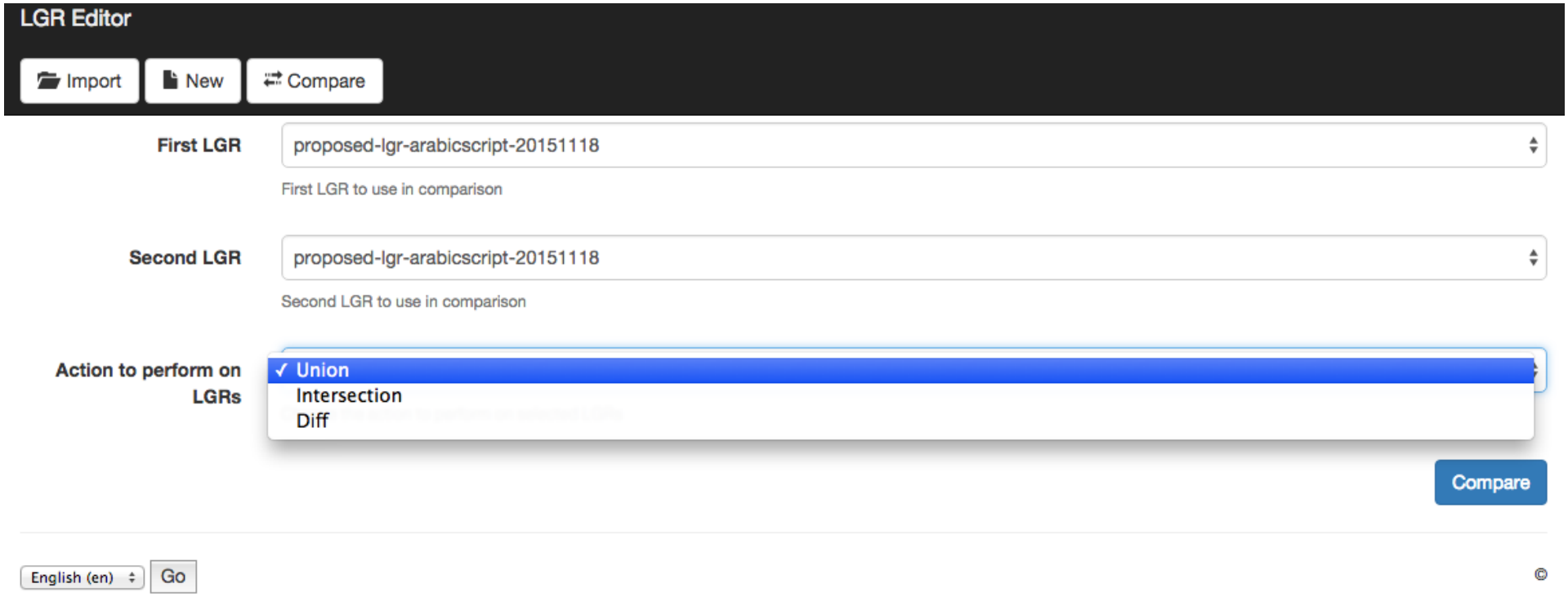
LGR Toolset – Phase 1: Create LGR



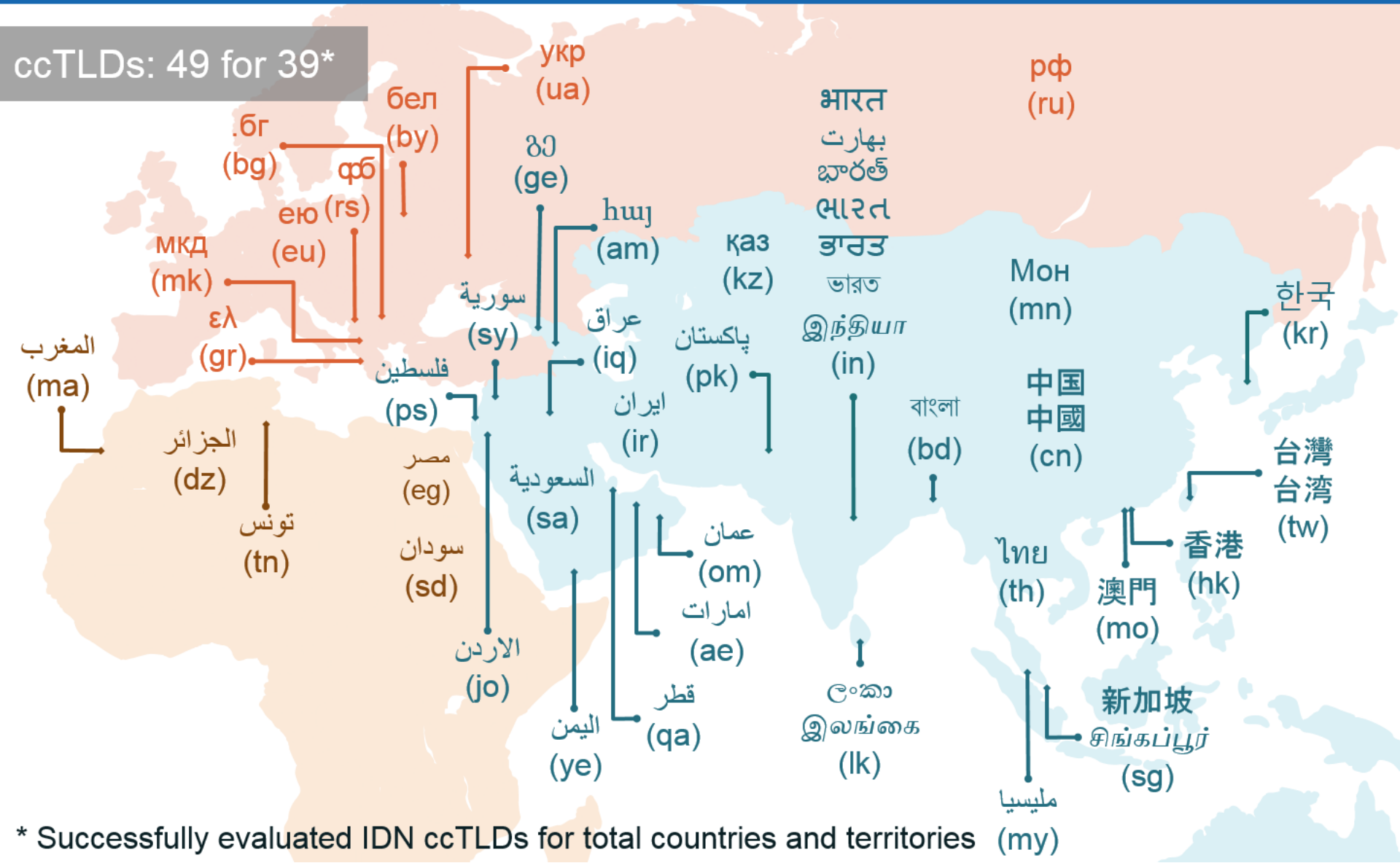
LGR Toolset – Phase 2: Use LGR



LGR Toolset – Phase 3: Manage LGRs



IDN Country Code Top-Level Domains



* Successfully evaluated IDN ccTLDs for total countries and territories

IDN ccTLD Fast Track Process

- Launched in late 2009
  - 49 IDN ccTLDs evaluated representing 39 countries/territories
  - 43 IDN ccTLDs delegated representing 33 countries/territories
  - Requests cover 18 scripts for 27 languages

- Currently under annual review
  - Public comment announced on 15 Jan. 2015
    - Second similarity review and process
  - Public comment closed on 17 March 2015
  - Board resolution on string similarity review on 25 June 2015
  - ccNSO formed EPSRP working group
  - Public comment to close after EPSRP Guidelines updated

Communication and Outreach Efforts

- Updated IDN web pages at icann.org/idn
- IDN Program sessions at ICANN meetings
- IDN Program updates to SOs/ACs at ICANN meetings
- Direct outreach

26-27 Nov. 2015	Workshop on IDNs and African Languages	Pointe-Noire, Congo
11 Jan. 2016	Training on XML Specification for LGR	Seoul, Korea
15 Feb. 2016	Workshop on Khmer Root Zone LGR	Phnom Penh, Cambodia
18 Feb. 2016	Workshop on Lao Root Zone LGR	Vientiane, Laos
1-2 Mar. 2016	G77 Meeting of Experts on ICT and Sustainable Development for South-South Cooperation	Bangkok, Thailand

- Blogs
  - LGR-1 Blog – 2 March 2016
- IDN community wiki pages
- IDN mailing lists
  - {vip, lgr, ArabicGP, ArmenianGP, ChineseGP, …}@icann.org

Contact IDN Program

- For information on IDN Program projects, please visit:
  http://icann.org/idn

- For queries regarding the IDN Program, please email:
  IDNProgram@icann.org

Update by the Integration Panel

Marc Blanchet
Integration Panel

Integration Panel Activities Since ICANN 54

- Reviewed final Arabic script LGR and final Armenian script LGR
- Produced first root zone LGR (LGR-1); public comments finished
- Interactions with active GPs
  - Armenian, CJK, Khmer, Lao
- Reviewed new GP proposals
  - Ethiopic, Cyrillic, Korean
- Formalized an integration procedure for root zone LGR
  - Developed format to document root zone LGR

LGR-1

- IP received Armenian and Arabic LGRs, which both passed public comments
  - IP reviewed the Armenian LGR and found it needed to be considered together with other scripts → deferred
  - IP reviewed the Arabic LGR and found it did not depend on any other scripts → accepted in LGR
  - IP conducted extensive review of integration process, using additional LGRs

LGR-1 (contd.)

- Overview and summary:
  - https://www.icann.org/sites/default/files/lgr/lgr-1-overview-01dec15-en.pdf
- Merged XML file:
  - https://www.icann.org/sites/default/files/lgr/lgr-1-common-01dec15-en.xml
- Element XML file (Arabic):
  - https://www.icann.org/sites/default/files/lgr/lgr-1-common-01dec15-en.xml
- Repertoire description in PDF format:
  - https://www.icann.org/sites/default/files/lgr/lgr-1-non-cjk-01dec15-en.pdf
- HTML documentation (extracted from XML files), Merged and Arabic:
  - https://www.icann.org/sites/default/files/lgr/lgr-1-common-01dec15-en.html
  - https://www.icann.org/sites/default/files/lgr/lgr-1-arabic-script-01dec15-en.html

IETF Matters

- Lager Working Group (XML LGR format)
  - Converging to final specifications
  - Expecting to be sent to IESG for approval in next months

- IDNA2008 repertoire update not happening
  - Related to LUCID concern
    - See: https://www.iab.org/documents/correspondence-reports-documents/2015-2/iab-statement-on-identifiers-and-unicode-7-0-0/
  - As a consequence, IDNA is still synchronized with Unicode v6.3 when Unicode v9.0 will be published in 4 months

Coming Up

- Review of Khmer and Lao LGRs (ongoing)
- Interaction with CJK GPs concerning their current LGR drafts
- Review of new GP proposals

IDN Implementation Guidelines

Edmon Chung
IDNGWG Co-Chair

IDN Guidelines WG Presentation Overview

1. Background and Purpose
2. IDNGWG Members
3. Current Topics Being Considered

Background and Purpose

- Purpose
  - Guidelines for IDN registration policies and practices at the second level
  - Designed to address end-user concerns, e.g., minimize user confusion

- Relevance
  - Contractually binding for registrars and registries Recommended for IDN ccTLDs

- Status
  - GNSO community requested for updating the guidelines
    - Previous version (3.0) updated in 2011
  - Currently being reviewed and updated by IDNGWG

IDN Guidelines WG Members

	Name	Organization	Sponsoring Organization
1	Satish Babu	ISOC-TRV	ALAC
2	Wael Nasr	TLDVILLA LLC	ALAC
3	Mats Dufberg	IIS	ccNSO
4	Pablo Rodríguez	Puerto Rico TLD	ccNSO
5	Edmon Chung	DotAsia	GNSO
6	Christian Dawson	I2C	GNSO
7	Chris Dillon	University College London	GNSO
8	Kal Feher	AusRegistry	GNSO
9	Dennis Tan	Verisign	GNSO
10	Jian Zhang	KNET	GNSO
11	Ram Mohan	Afilias	SSAC
12	Patrik Fältström (will only review work)	Netnode	SSAC

Topics Being Considered

	Topic	IDNGWG current position
1	**Transition and Terminology.** IDNA2008 adopted; address any residual IDNA2003 issues. Identify terminology through Label Generation Rules, relevant RFCs and additional IDN work at ICANN	Relevant
2	**Format of IDN Tables.** Formal machine-readable format Label Generation Rules or LGR	Relevant
3	**Consistency of IDN Tables.** Content more consistent across registries and across levels for predictable user experience by sharing the LGRs across registries, considering reference IDN tables and other relevant work	Relevant

Topics Being Considered

	Topic	IDNGWG current position
4	**IDN Variants.** Nomenclature, states of variants and management process; relevant policies, e.g., ownership, automatic activation, ceiling value, choice between variants, etc.	Guidance at high level
5	**Similarity and Confusability of Labels.** Confusability at second level, arising from homoglyphs, cross-script homoglyphs, relevance of upper case, script mixing and other (e.g., semantic) mechanisms	Guidance at high level
6	**Registration Data.** Represent and manage registration data for variants of IDNs	Will be considered

Feedback

- Face to face during ICANN 55
  - Date: Wed, 9 March 2016 - 17:15 to 18:30
  - Room: Ametyste
- Email us at: idngwg@icann.org or IDNProgram@icann.org
- Visit us at:
  - IDN Program webpage: https://www.icann.org/resources/pages/implementation-guidelines-2012-02-25-en
  - Community Wiki page: https://community.icann.org/display/IDN/IDN+implementation+Guideline

Reference Second Level LGRs

Michel Suignard
Sheypa

Presentation Outline

- Background
- Guidelines
- Response to Public Comments
- Challenges in Developing the Tables
- Status of the LGRs

Background

- Development of a set of reference Label Generation Rulesets (LGR) for selected languages table on the second level
  - Enable registries to adopt these or use them as basis for further modifications

- Guidelines for developing reference LGRs for the second level

- Set of the language-based LGRs current under development:
  - Latin: Bosnian, Danish, English, Finnish, French, German, Hungarian, Icelandic, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Spanish, Swedish
  - Cyrillic: Belarusian, Bosnian, Bulgarian, Macedonian, Montenegrin, Russian, Serbian, Ukrainian
  - Mixed scripts: Japanese, Korean
  - Others: Arabic, Chinese, Hebrew

Guidelines

- Describe the process to be followed in developing language-based LGRs for the second level
- Determining reference sources for language coverage
- Setting a multi-stage development process
- Review process
  - Linguistic
  - Security and stability
  - Public review

Response to Public Comments

- Comments were mostly about the scope and applicability of these LGRs, not about their development process
- LGR primary use is in context of Pre-Delegation Testing (PDT) and Registry Services Evaluation Process (RSEP) which are processes related to gTLDs
- LGRs are only reference points for other purposes
- LGRs will be updated based on community feedback and registry input

Challenges/Opportunities in Developing LGRs

- Challenges:
  - Language coverage is a moving target
  - Multiplicity of source references (CLDR, standards)
  - Dictionaries altered through integration of words from foreign sources
  - Definition and scope of language
    - Example: Arabic from Morocco to Iraq

- Opportunities:
  - Benefit of experience gained in the root LGR:
    - Arabic language LGR is a subset of the root Arabic LGR
  - Extensive use of work already done in second level IDNA repertoires and rules

Status

- All 29 LGRs ready for public review
- XML files self documenting through the use of a large description element, including HTML syntax elements
- The documentation is an HTML file automatically derived from the XML file
- Documentation elements:
  - Source references
  - Repertoire
  - Rationale about inclusion/exclusion
  - Variants, if any
  - WLE and context rules as appropriate

Thank You

Resources:

- Guidelines: https://www.icann.org/en/system/files/files/lgr-guidelines-second-level-30oct15-en.pdf
- XML specification for LGRs: http://www.ietf.org/id/draft-ietf-lager-specification

Update by Khmer GP

Rapid Sun
Secretary, Khmer GP

Agenda

- Introduction to Khmer Language
- Introduction to Khmer Script
- Membership of Khmer GP
- Project Schedule
- Methodology
- Feedback

Introduction to Khmer Language

- Khmer language has been written since the early 7th century using a script originating in South India
- Khmer borrowed some words from Sanskrit and Pāli
- Khmer was borrowed and found in Thai, Lao, Kuay, Stieng, Samre, Cham and others
- Official language in Cambodia with 15 million people
- 1.3 million people in southeastern Thailand
- More than a million people in southern Vietnam

Source: http://www.britannica.com/topic/Khmer-language

Introduction to Khmer Script

- Abugida type
- Time period from c. 611– present
- System derived from Brahmi
- Thai and Lao derived from Khmer script
- ISO 15924 - Khmr 355
  - Direction left-to-right
  - 146 characters
- Unicode range
  - U+1780–U+17FF Khmer
  - U+19E0–U+19FF

Source - https://en.wikipedia.org/wiki/Khmer_alphabet

Membership of Khmer GP

Position	Name	Organization
Chair	Sopheap Seng	National Institute of Posts, Telecoms and ICT (NIPTICT)
Secretary	Rapid Sun	Center of Research and Development, NIPTICT
Member	Daro Chin	Telecom Cambodia
Member	An Ra	Ministry of Post and Telecommunications
Member	Hong Danh	Unicode Expert
Member	Ken Rangsey	Royal University of Phnom Penh
Member	Yatal Lim	Telecom Regulator of Cambodia
Member	Mok Khemera	Ministry of Posts and Telecommunications
Member	Than Makara	R & D Center, NIPTICT
Member	Chhan Kimsoeun	Royal University of Phnom Penh

Project Schedule

Activity	Description	Start Date	Finish Date
Develop Principles	Principles to be used to determine valid code points, variants and labels	10 June 15	10 June 15
Determine Code Points	Select the code points from MSR which are needed for Root Zone LGR	10 July 15	10 July 15
Determine (Any) Variants	From the codes points selected, determine if the end-user may confuse two code points	10 Sep 15	10 Nov 15
Determine Label Rules	Determine if there are any label level constraints on the use of selected code points	10 Nov 15	12 Feb 16
Hold Public Consultation	Hold a workshop on the work accomplished by the generation panel to get feedback from the community and experts	Early Dec 15	15 Feb 16
Write Proposal and Create XML	Write up the Root Zone LGR proposal, including references to each code point included, why variants are needed and details of label rules developed + XML file	10 Dec 15	12 Feb 16
Submit	Get public comments, finalize and submit	10 Feb 16	19 Feb 16

Methodology

- Discussion within linguists and Unicode expert in Khmer Generation Panel
  - Develop code point
    - Consonants
    - Dependent vowels
    - Independent vowels
    - Consonant shifters
    - Diacritics
  - Develop variant
    - Khmer variant
    - Khmer and Thai variant
    - Khmer and lao variant
    - Khmer and Myanmar variant

Methodology (Cont.)

- Develop 11 label rules
- Develop XML file
- Develop cross script variant
  - Khmer-Thai
  - Khmer-Lao
  - Khmer-Burmese

Feedback

- 10 proposal editions (0.1 to 1.0)
- Share 10 proposal editions with Khmer GP
- 2 feedbacks from integration panel
- 1 public workshop – invited GP, universities, NGOs, companies

Update by Lao GP

Chittaphone Chansylilath
Coordinator, Lao GP

Agenda

1. Overview of Lao Generation Panel
2. Introduction to Lao Language
3. Language Generation Rules for Lao
4. Variants Analysis
5. Lao Language Writing Structure
6. Questions and Suggestions

Overview of Lao Generation Panel

No.	Name and Surname	Organization	Role	Expertise
1.	Mr. Phonpasit Phissamay	Director General of E-Government Center	Chair	Lao localization development projects since 2003 and integration of Lao in e-government
2.	Mr. Khamphanh Souvannakha	Deputy Director of National Internet Center	Co-Chair on DNS	Supervision of .la domain name registration
3.	Mr. Valaxay Dalaloy	Cabinet Office	Policy Member	ICT policy development and Lao localization development projects since 2003
4.	Mr.Bualy Paphaphanh	National University of Laos	Linguistic Member	Linguistic expert and advisor to Lao localization projects
5.	Mr.Sengfa Holanouphab	National University of Laos	Linguistic Member	Linguistic expert
6.	Mr. Bounmy Kongmany	National University of Laos	Linguistic Member	Linguistic expert

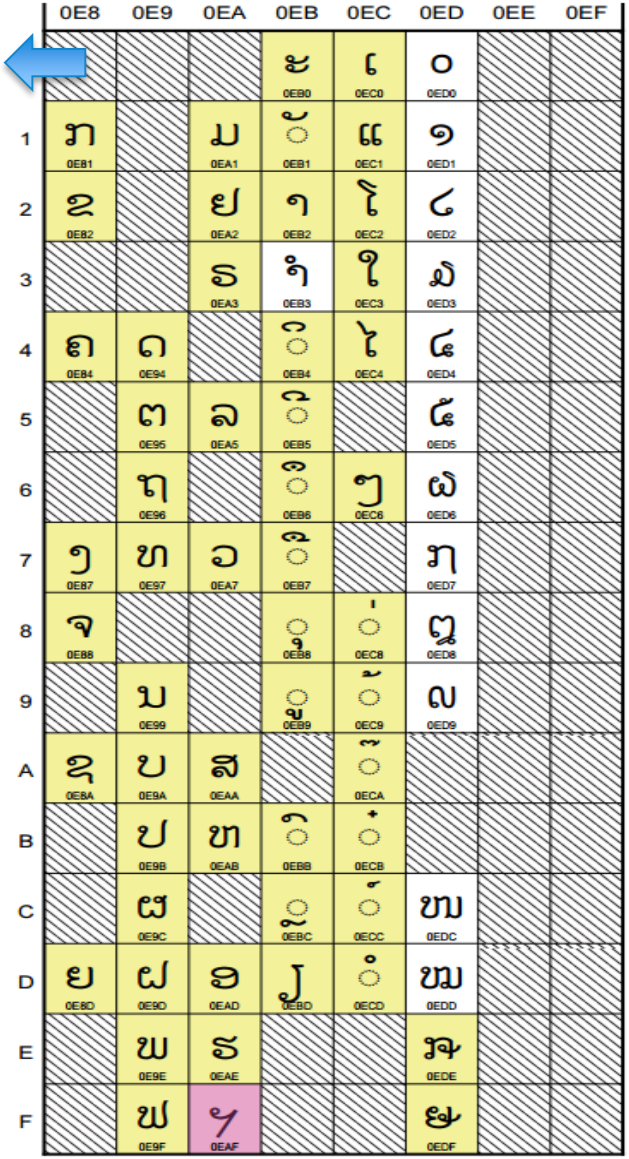
Overview of Lao Generation Panel (Cont.)

No.	Name and Surname	Organization	Role	Expertise
7.	Mr. Thonglor Douansouvanh	Vientiane times newspaper	Community Member	Media
8.	Mrs. Chittaphone Chansylilath	E-Government Center	Technical member	Lao localization specialist, Lao Font, Lao Keyboard, Lao OCR, TTS Projects.
9.	Mr. Phouthong Sisavath	National Internet Center	Technical Member	DNS operation
10.	Ms. Phavanhna Douangboupha	National Internet Center	Technical Member	Coordinator for international cooperation
11.	Mr.Khamphay Inthara	E-Government Center	Technical Member	Lao localization specialist, Lao font, Lao keyboard project
12.	Mr. Saysomvang Souvannavong	National Internet Center	Technical Member	DNS operation
13.	Mr.Phousana Silivong	E-Government Center	Technical Member	Lao localization specialist, Lao font, Lao keyboard project

Introduction to Lao Language

- Lao language is the official language of Laos; it originates from the Tai-Kadai language spoken by approximately 30 million people mainly in Laos and in Isan, the north-eastern part of Thailand. The rest are in neighboring Cambodia, China, Myanmar, Vietnam and some other countries.
- Lao is a tonal language (according to the Lao grammar book published in 2000), there are 6 tones: high normal, low normal, mid, high falling, mid falling, and low rising. The Lao dialect is differentiated into five main areas in Laos - Vientiane, Luang Prabang, Xieng Khuang, Khammuan and Champassak provinces - while each part of Isan has also different dialects.
- The Lao script derives from Pali and Sanskrit. It has continuously developed over time and is unique to the Lao language. It is used for writing Lao and one of its main characteristics is that there is no space between words and the writing runs from left to right.

Language Generation Rules for Lao Language



Type of Characters	Unicode	IDNA 2008	MSR-2	LGR
Consonants	31	31	29	27
Vowels	19	18	18	18
Tone mark	4	4	4	4
Signs	3	3	2	2
Digits	10	10	-	-
Total	**67**	**66**	**53**	**51**

Variants Analysis

1. In script variants:

Some code points can be written in different sequences when they come together, but may still form the same label visually in some fonts.

For example: ນ້ (0E99 0EB5 0EC9) can also be written as ນ້ (0E99 0EC9 0EB5). Therefore, 0EB5 0EC9 cane be considered as a variant of 0EC9 0EB5.

This variable sequencing is not consistently supported by all fonts and systems. Therefore, the Lao Generation Panel agrees that only the valid sequence should be allowed using WLE rules and other possible sequences should not be valid, and not considered variant sequences.

Variants Analysis

2. Cross script variants:

There are some similarities between Lao and other languages in South East Asia like Thai and Khmer. The Lao GP has listed the mapping table as per similarity pair Lao-Thai letters and Lao-Khmer letters.

Lao and Thai

0E88 ຈ LAO LETTER CO	0E08 จ THAI CHARACTER CHO CHAN
0EB0 ະ LAO VOWEL SIGN A	0E30 ะ THAI CHARACTER SARA A

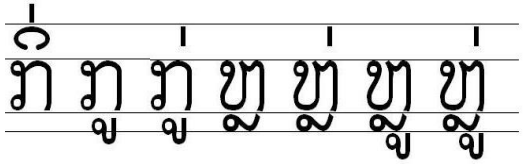
Lao and Khmer

0EB8 ຸ LAO VOWEL SIGN U	17BB ុ KHMER VOWEL SIGN U
0EB9 ູ LAO VOWEL SIGN UU	17BD ូ KHMER VOWEL SIGN UU

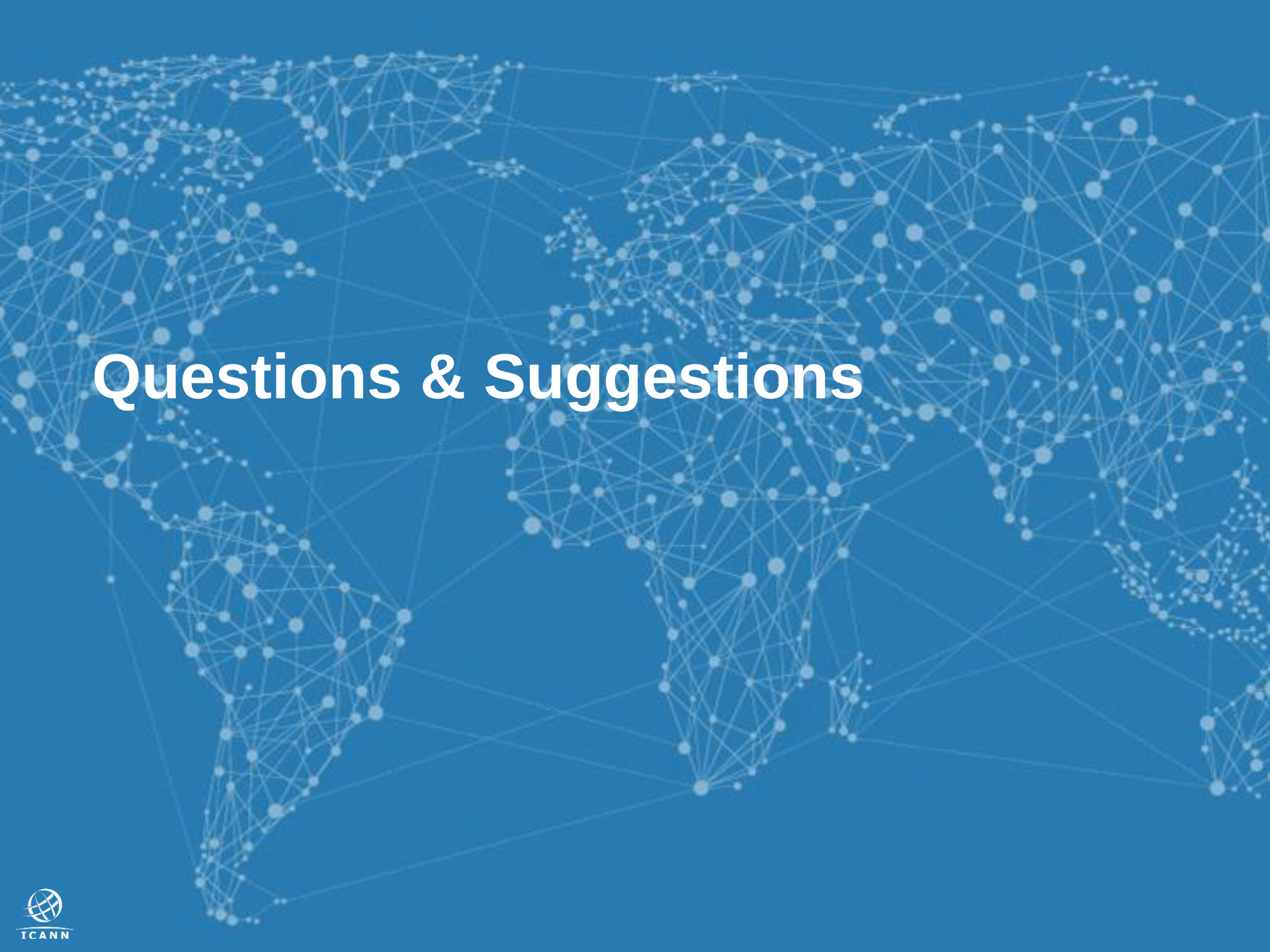
Lao Language Writing Structure

		X5					
		X4					
X0	X1	X	X6	X7	X8	X9	X10
		X2					
		X3					

(Syllable structure)



- X0 represents a vowel which occurs before the nuclear consonant.
- X1 is a combination consonant which comes before the nuclear consonant.
- X represents the nuclear consonants.
- X2 is a combination consonant which comes after the nuclear consonant, and placed under or next to the nuclear consonant.
- X3 represents a subscription vowel which occurs under the nuclear consonant.
- X4 represents a superscription vowel which occurs over the nuclear consonant.
- X5 represents a tone marks which occurs over the nuclear consonant or upper vowels.
- X6 represents consonant vowel, which occurs after nuclear consonant.
- X7 represents an after vowel.
- X8 represents alternate consonants.
- X9 represents alternate consonant to pronounce foreign language.
- X10 represents a sign mark.


Questions & Suggestions

Update by Latin GP

Chris Dillon
Co-Chair, Latin GP

Agenda

1. Scope of the Latin Generation Panel
2. Members of the Latin Generation Panel
3. Additional Expertise Required
4. Repertoire
5. What's Next?
6. Questions and Contact Details

Scope of the Latin Script (extract)

Latin GP - WORLD LANGUAGES USING LATIN SCRIPT

	Language	ISO 639-3	Classification	Population	Lang, status	Language map
183.	Tuvan,Tuva, Diba, Kök Mungak, Soyod, Soyon, Soyot, Tannu-Tuva, Tofa, Tokha, Tuba, Tuvan, Tuvia, Tuvin, Tuvinian, Tyva, Uriankhai, Uriankhai-Monchak, Uryankhai	tyv	Turkic, Northern	268,000	4	Central Russia,,China
184.	Wolof, Ouolof, Volof, Walaf, Waro-Waro, Yallof	wol	Niger-Congo, Atlantic-Congo, Atlantic, Northern, Senegambian, Fula-Wolof, Wolof	3,930,000	4	Senegal
185.	Shavante,Xavante, Akuên, Akwen, A'uwe Uptabi, A'we, Chavante, Crisca, Pusciti, Shavante, Tapacua	xav	Jean, Central	9,600	4	Eastern Central Brazil,Southern Brazil
186.	Afar,Adal, 'Afar Af, Afaraf, "Danakil" (pej.), "Denkel" (pej.), Qafar	aar	Afro-Asiatic, Cushitic, East, Saho-Afar	1,379,200	5	Djibouti, Eritrea and Ethiopia
187.	Acehnese, Achehnese AchineseAceh	ace	Austronesian, Malayo-Polynesian, Malayo-Chamic, Chamic, Acehnese	3,500,032	5	Indonesia, Sulawesi, Indonesia, Sumatra
188.	Acholi, Acoli Acooli Akoli Atscholi Dok Acoli Gang Lëbacoli Log Acoli Lwo Lwoo Shuli	ach	Nilo-Saharan, Eastern Sudanic, Nilotic, Western, Luo, Southern, Luo-Acholi, Alur-Acholi, Lango-Acholi	1,197,000,	5	South SudanUganda
189.	Achuar-Shiwiar, Achual Achuale Achuar Achuara Jivaro Maina	acu	Jivaroan, Jívaro	7,000	5	EcuadorPeru
190.	Ajië, A'jie Anjie Houailou Wai Wailu	aji	Austronesian, Malayo-Polynesian, Central-Eastern Malayo-Polynesian, Eastern Malayo-Polynesian, Oceanic, Central Eastern Oceanic, Remote	5,360	5	North and South provinces, east coast, Houaïlou and Monéo to

Current Membership of Latin Generation Panel

Name	Country	Expertise	Name	Country	Expertise
Tunde Adegbola	Nigeria		Tarik Merghani	Sudan	
Sarat Assirou	Ivory Coast	Dioula, Baoulé Bété, Ebrié	Meikal Mumin	Germany	German, English, African languages
Dwayne Bailey	South Africa	Afrikaans, Sotho, Venda, Tswana	Danko Jevtovic	Serbia	Serbian, English
Ahmed Bakht Masood	Pakistan	Urdu, English	Ngo Thanh Nhan	US	Vietnamese
Matthias Brenzliger	South Africa		Daniel Omondi	Kenya	
Eric Brunner-Williams	US	English	Oscar Gabriel Ledesma Piñeiro	Argentina	Spanish, English
Chris Dillon (Co-Chair)	UK	English, German, Spanish	Gideon Kiprono Rop	Kenya	
Tarkan Doruk	UAE	Turkish	Jean-Jacques Subrenat	France	French, English
Yashar Hajiyev	Azerbaijan	Azerbaijani, English	Mirjana Tasić	Serbia	Serbian, English
Hazem Hezzah	Egypt	Arabic, German	Aysegul Tekce	Turkey	Turkish
Paul Hoffman	US	English	Bonface Witaba	Kenya	Swahili

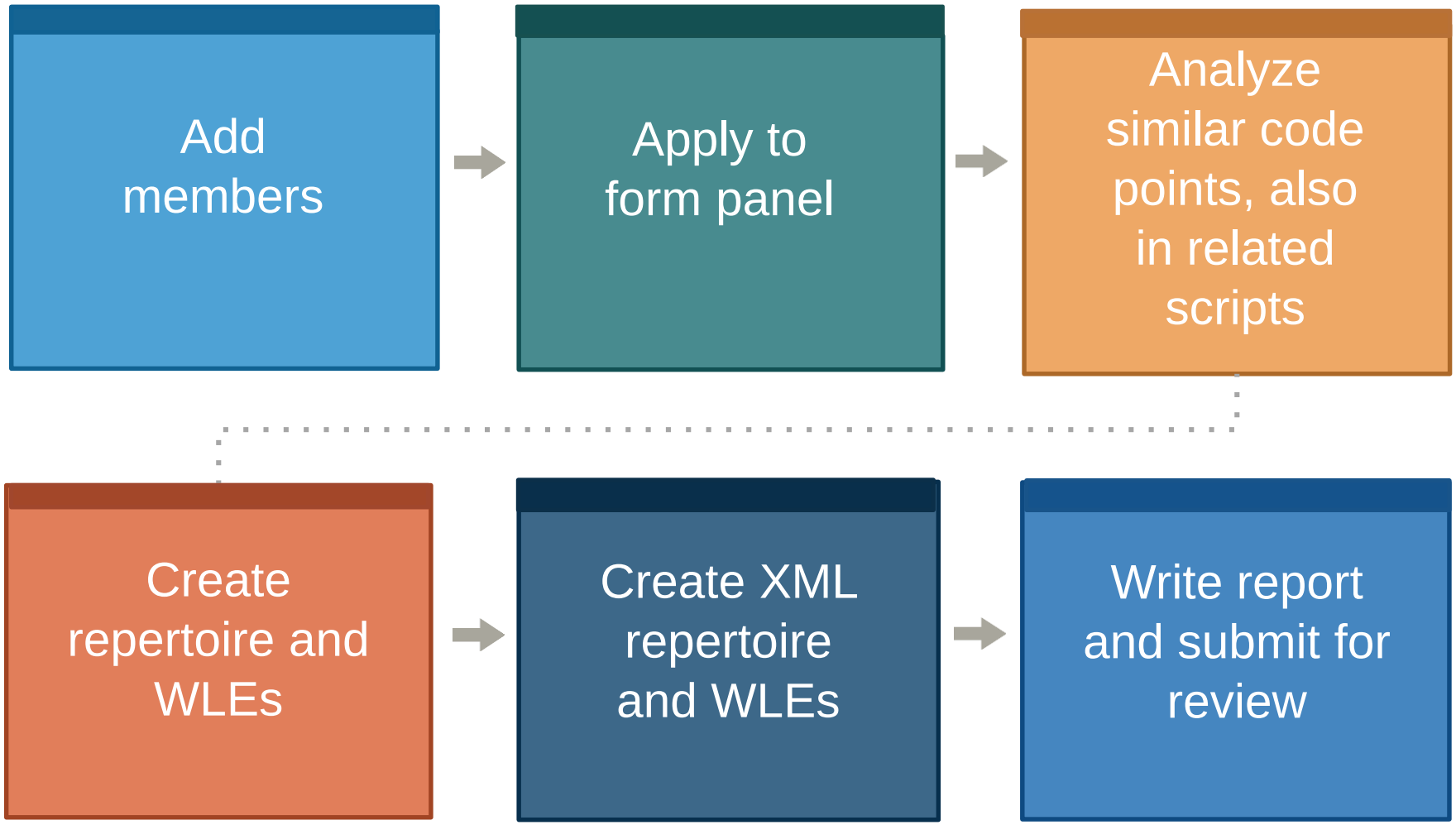
Additional Expertise Needed

- ? National and regional policy makers
- X Technical community (general and DNS)
- ? Security and law enforcement
- ? Academia (technical and linguistic)
- O Community-based organizations
- O Local language computing using Unicode and specifically IDNs

Draft Latin Script Repertoire (extract)

							Z WITH DOT ABOVE
017E	ž	Czech, Turkmen	1 Czech	ces	10,619,340	CLDR	LATIN SMALL LETTER Z WITH CARON
0180	ƀ	Jarai	5 Jarai	jra	262,800		LATIN SMALL LETTER B WITH STROKE
0188	ƈ	Serer	5 Serer	srr	1,161,900		LATIN SMALL LETTER C WITH HOOK
0192	ƒ	Ewe	3 Ewe	ewe	3,112,000	CLDR	LATIN SMALL LETTER F WITH HOOK
0199	ƙ	Hausa	2 Hausa	hau	25,109,000	CLDR	LATIN SMALL LETTER K WITH HOOK
01A1	ơ	Vietnamese	1 Vietnamese	vie	67,778,030	CLDR	LATIN SMALL LETTER O WITH HORN
01A3	ƣ						LATIN SMALL LETTER OI
01A5	ƥ	Serer	5 Serer	srr	1,161,900		LATIN SMALL LETTER P WITH HOOK
01AD	ƭ	Serer	5 Serer	srr	1,161,900		LATIN SMALL LETTER T WITH HOOK
01B0	ư	Vietnamese	1 Vietnamese	vie	67,778,030	CLDR	LATIN SMALL LETTER

What's Next?


Add members
Apply to form panel
Analyze similar code points, also in related scripts
Create repertoire and WLEs
Create XML repertoire and WLEs
Write report and submit for review

Engage with ICANN and IDN Program

Thank You and Questions

Reach us at: IDNProgram@icann.org
Website: icann.org/idn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