

Pakistan School on Internet Governance

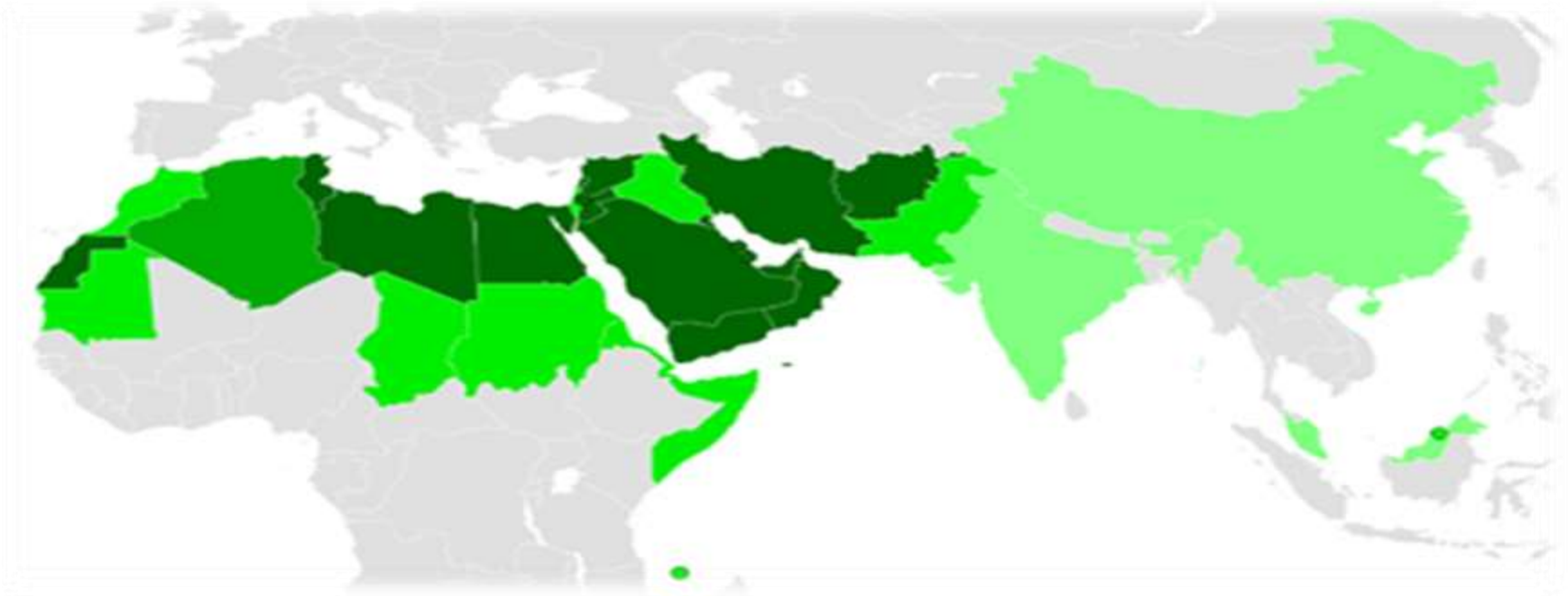
03-06 September 2018

Karachi

Arabic IDNs, and its Universal Acceptance

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Chair TF-AIDN

Arabic Script Region



- 22 Arab States and the Adjoining Countries of Iran, Pakistan, Afghanistan and Turkey
- Diversity in membership
- 12 Countries have IDN ccTLD's
- 9300+ IDN Registered Domain Names in the ccTLDs of countries included in this region

Community driven way forward: Task Force on Arabic Script IDNs

Creation and oversight by community based Middle East Strategy Working Group (MESSWG;

Root zone LGR proposal has been finalized

Working on second level LGR

Universal Acceptance of Arabic Script

LGR 2 Covered

Arabic

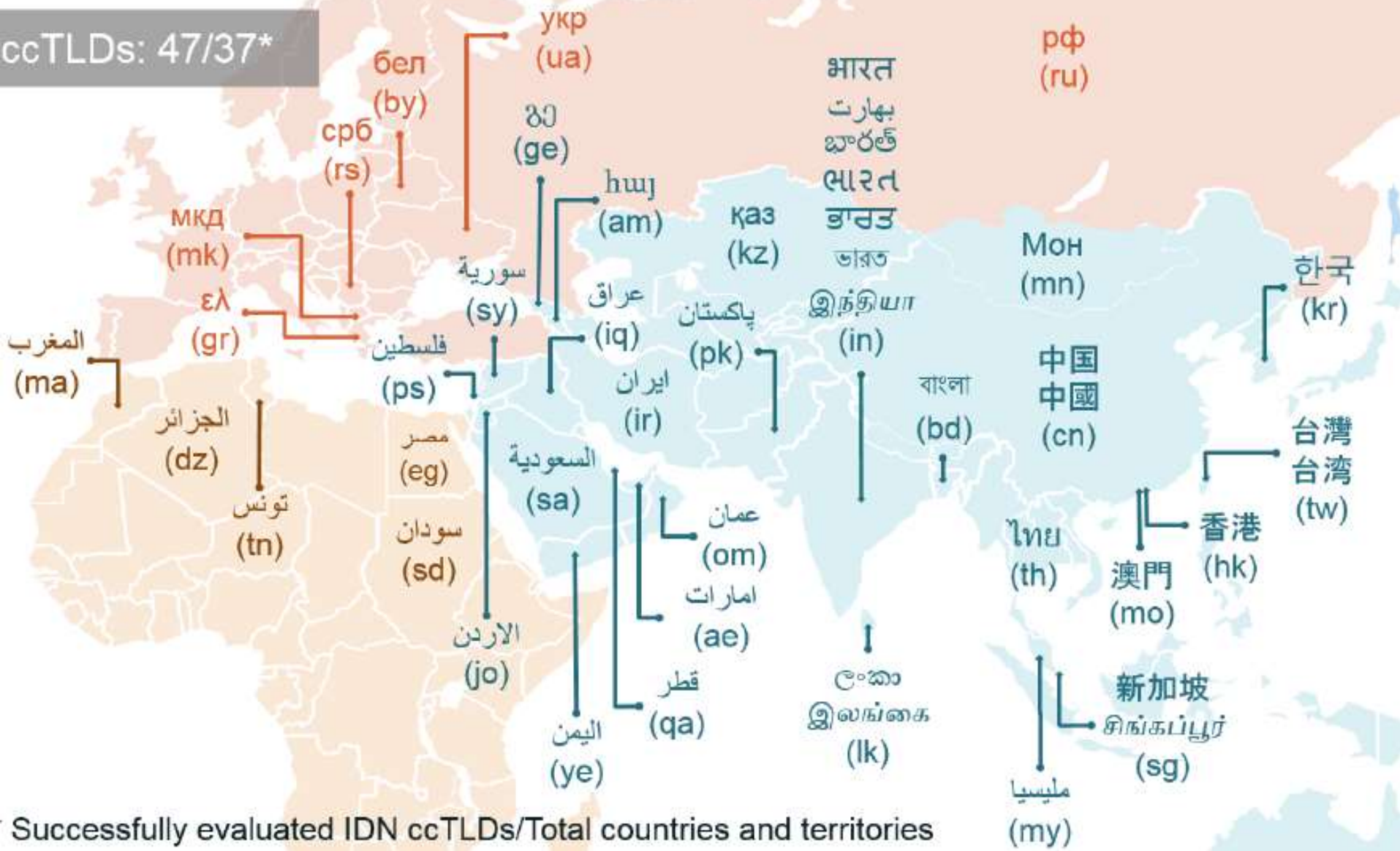
Urdu

Pashto

Persian

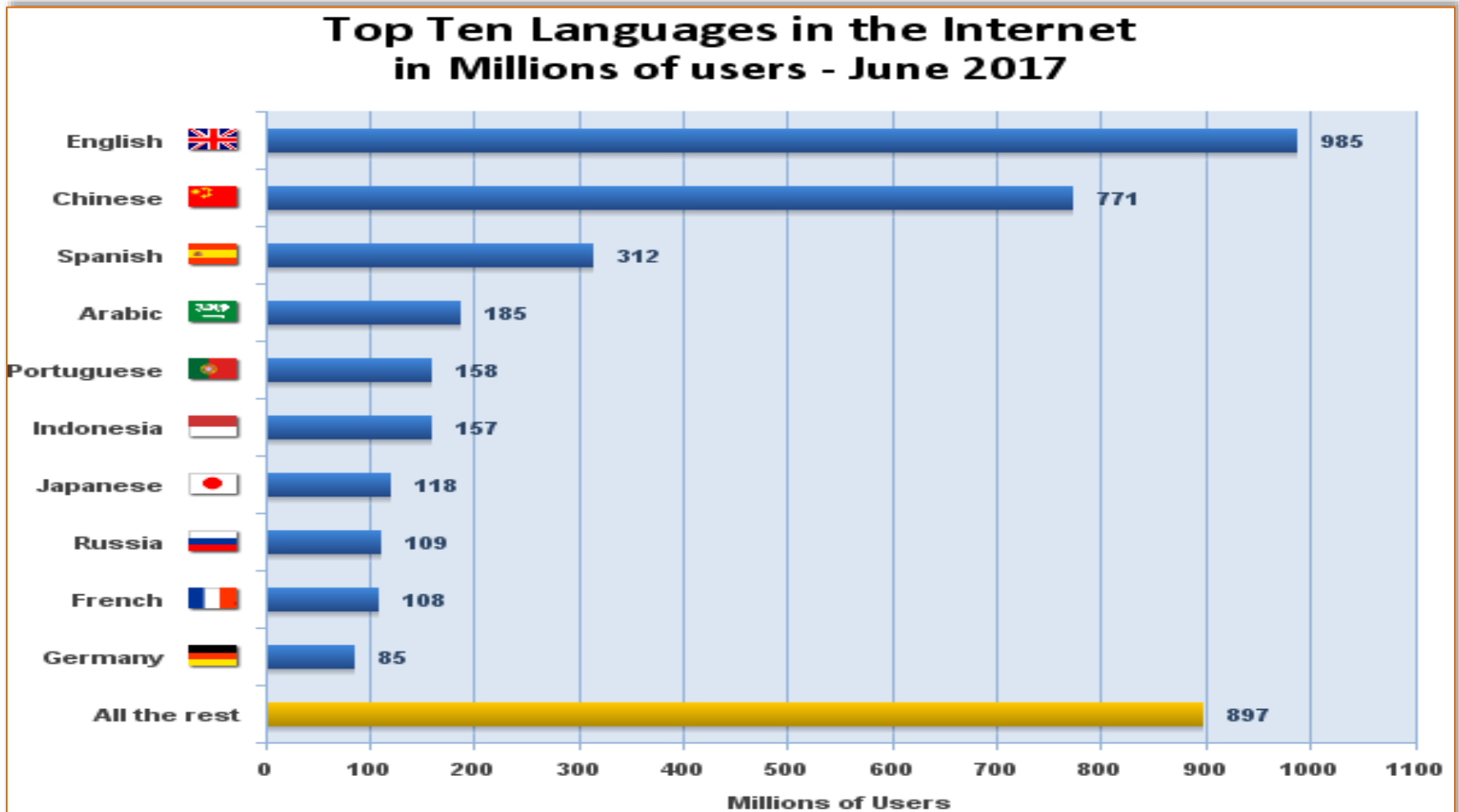
IDN Country Code Top-Level Domains

ccTLDs: 47/37*



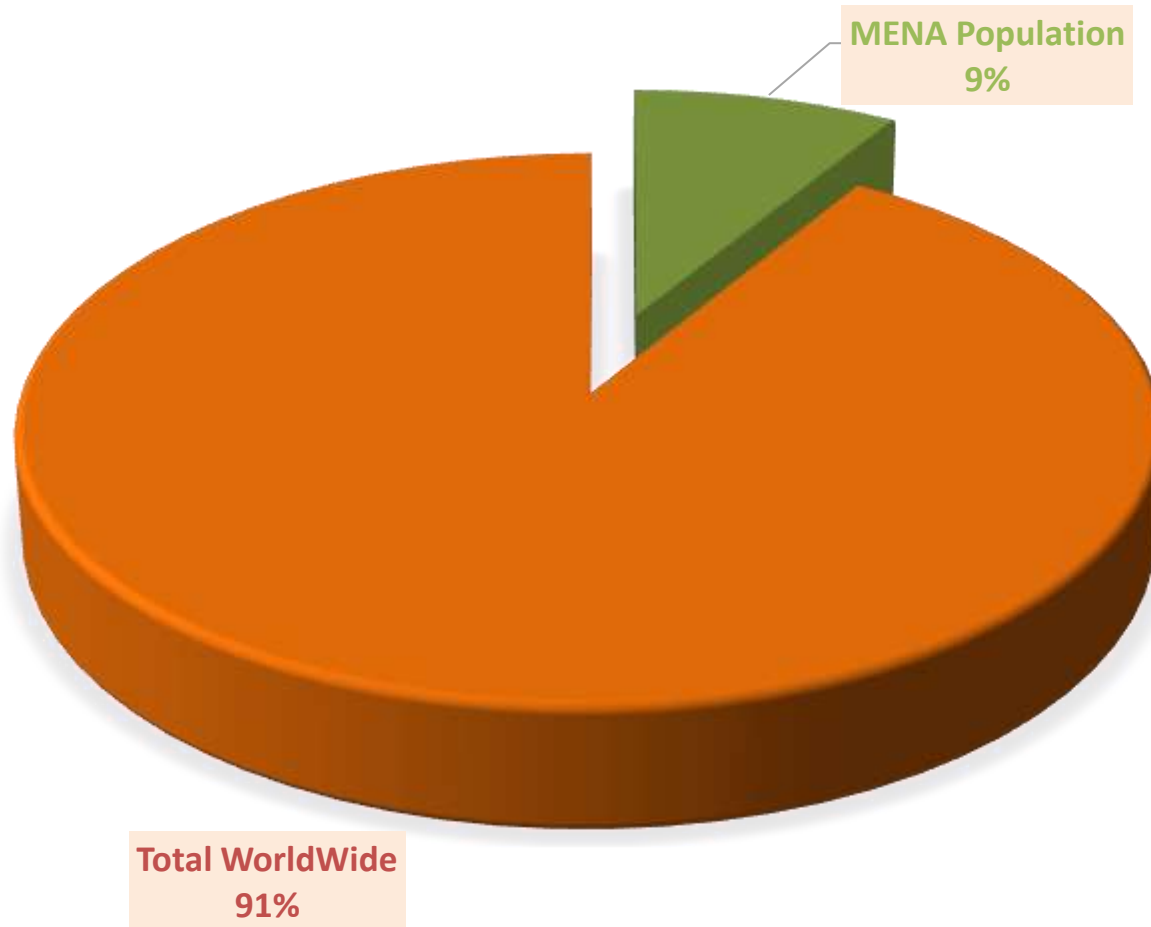
Successfully evaluated IDN ccTLDs/Total countries and territories

Some Statistics

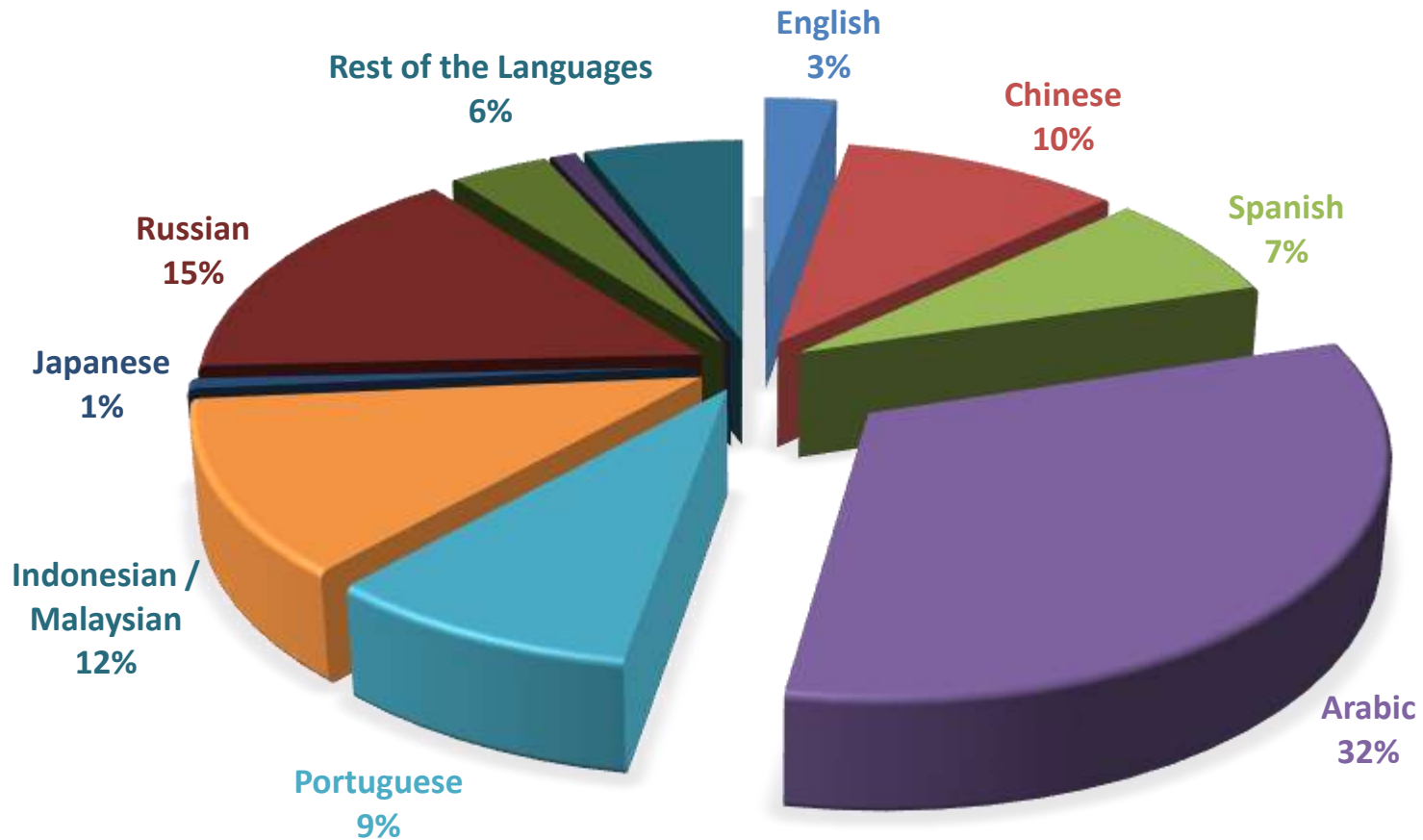


Source: Internet World Stats - www.internetworldstats.com/stats7.htm
Estimated total Internet users are 3,885,567,619 in June 30, 2017
Copyright © 2017, Miniwatts Marketing Group

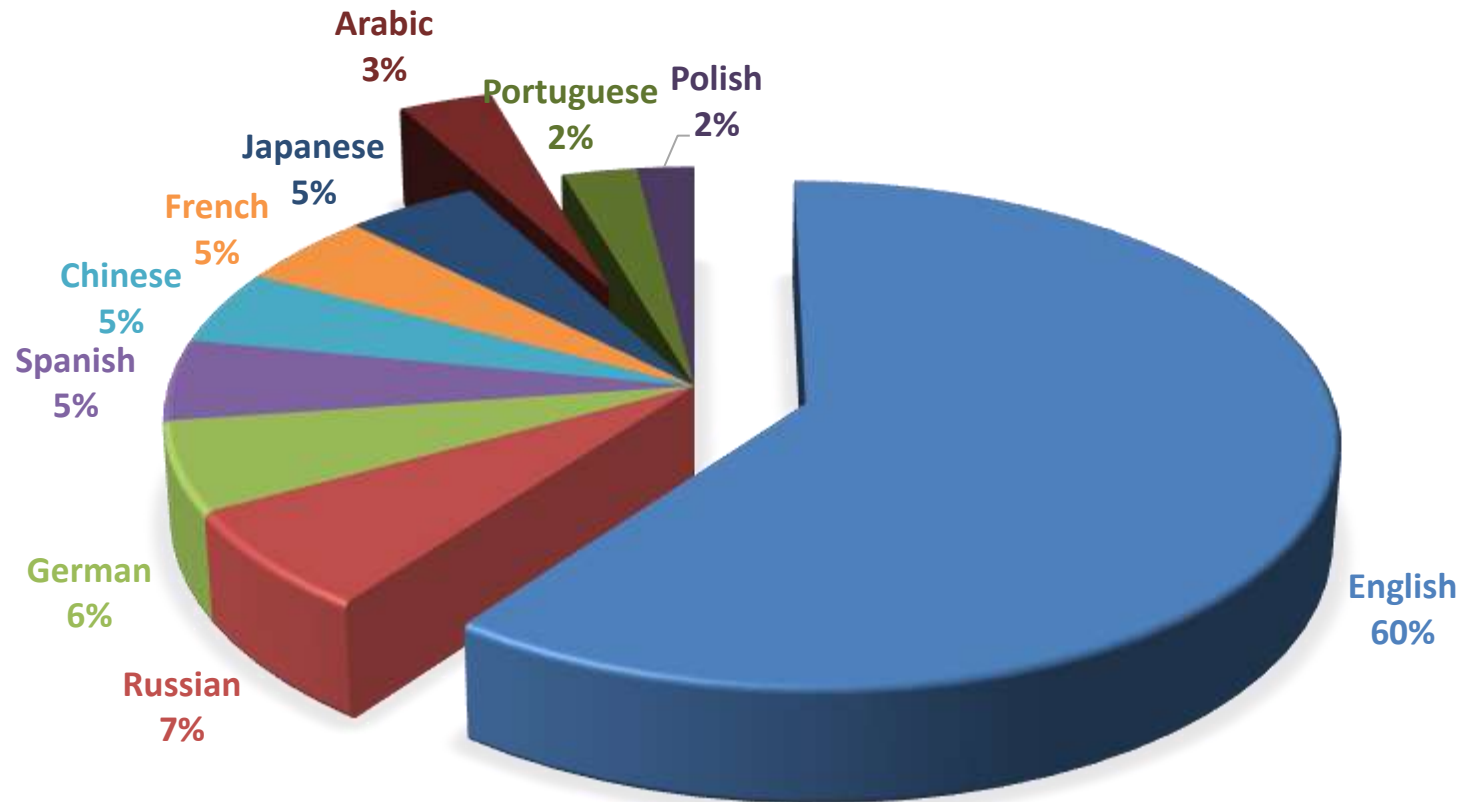
ARABIC SPEAKING REGION VERSUS WORLD POPULATION



USERS GROWTH IN INTERNET (2000 -2017)

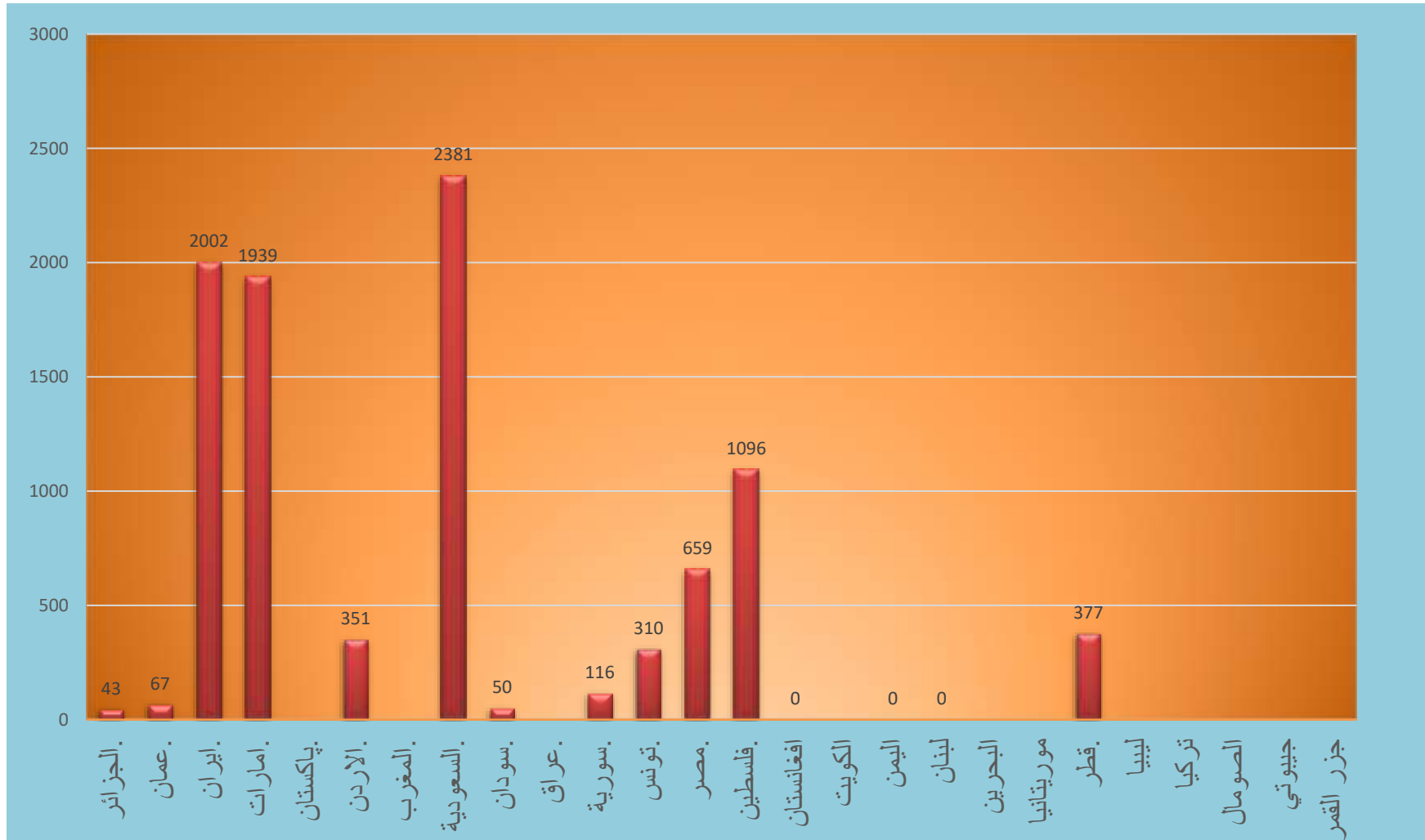


ARABIC CONTENT VS WORLDWIDE CONTENTS

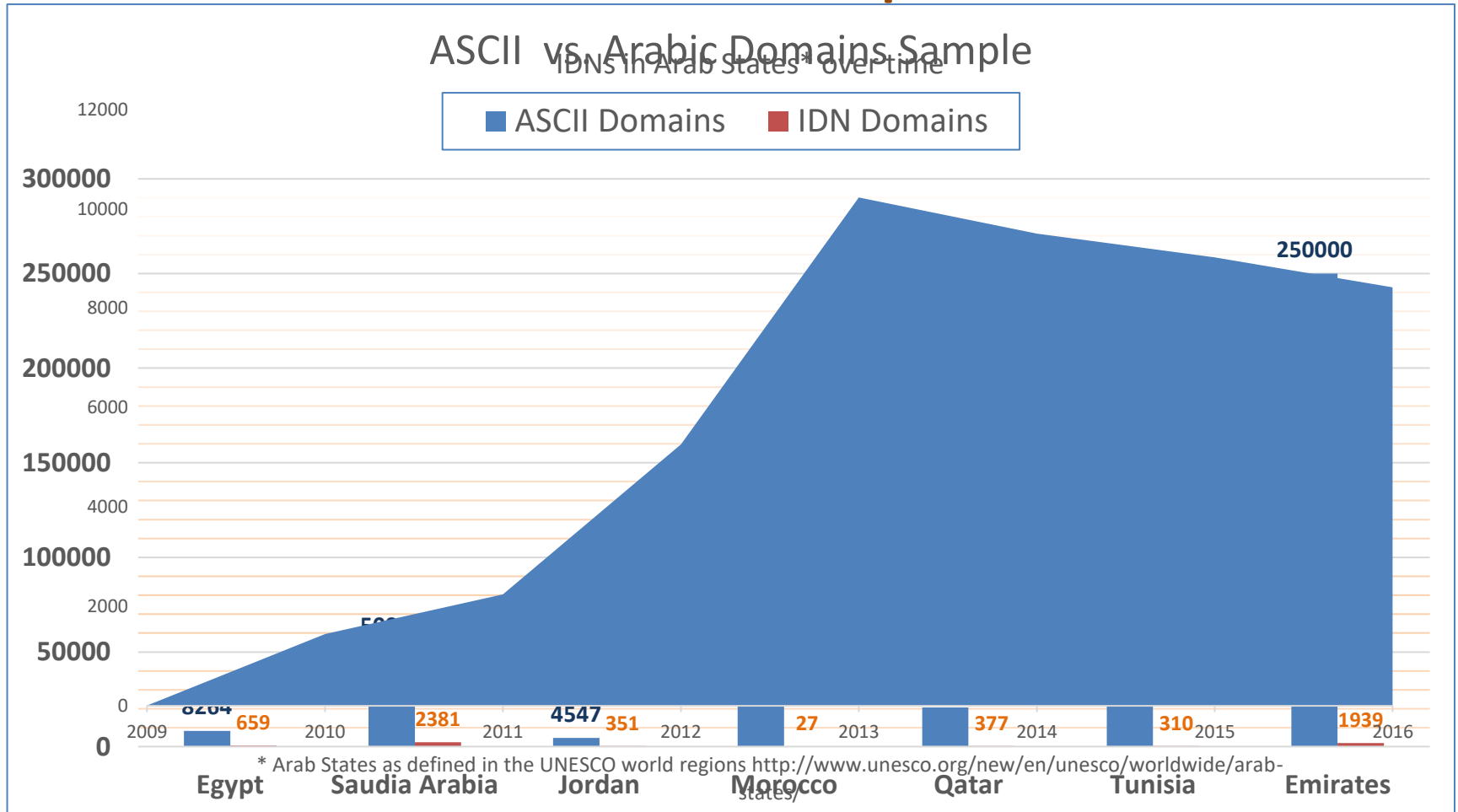


Source : <http://www.trustiko.com>

Arabic Script ccTLD Domain Name Registrations



ASCII Vs UniCode Domain Names in Arabic Script



Sources:

<http://www.registre.ma/language/en/resources/e-statistiques>

<http://www.registre.tn/en/index.php?rub=262&srub=329>

<http://www.nic.sa/ar/view/statistics>

EURID , year's 2017 report which is not yet finalised

Challenges: Arabic IDNs

Variants

IDNs uses characters outside ASCII, like Arabic, Chinese, Cyrillic, Japanese or Korean

An IDN variant Top Level Domain (TLD) can use characters which are different in another language

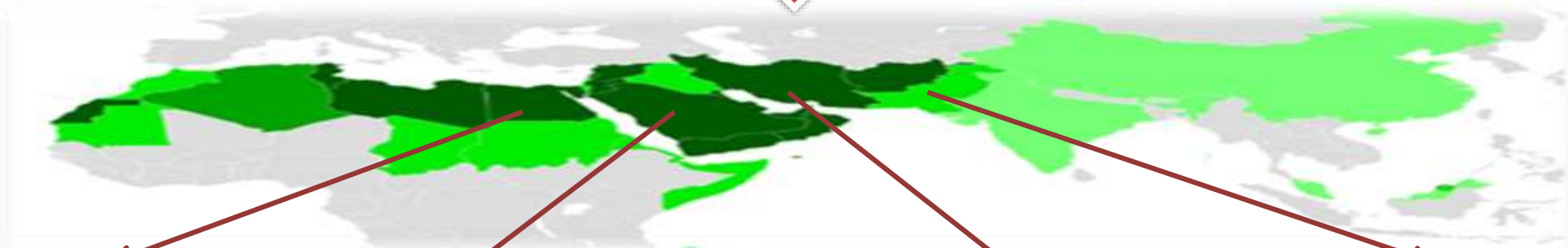
U+06A9 - ک - پاکستان

U+0643 - ك - پاکستان



Registrant will use his/her keyboard

مكة



مكة

U+0645
U+0643
U+0629

مكة

U+0645
U+0643
U+0647

مكة

U+0645
U+06A9
U+0647

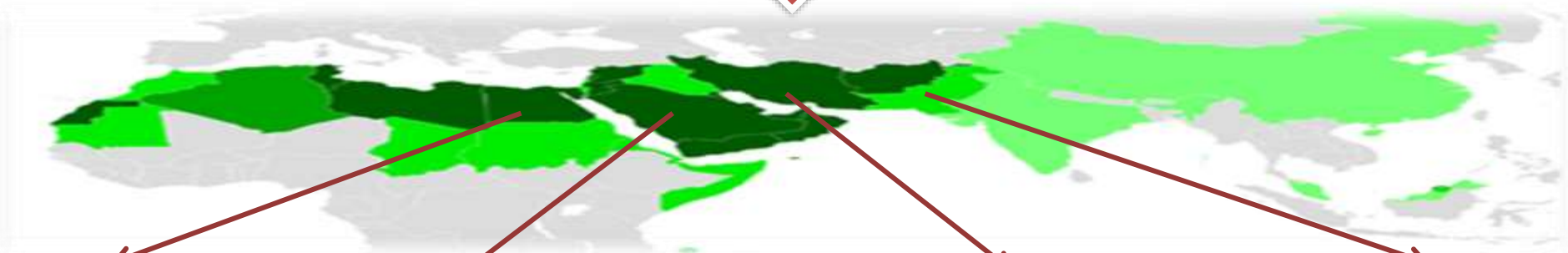
مكة

U+0645
U+06A9
U+06C1



Registrant will use his/her keyboard

علي



علي

U+0639
U+0644
U+0649

علي

U+0639
U+0644
U+064A

علي

U+0639
U+0644
U+06CC

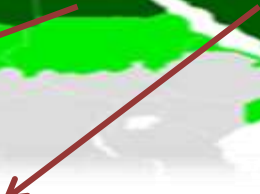
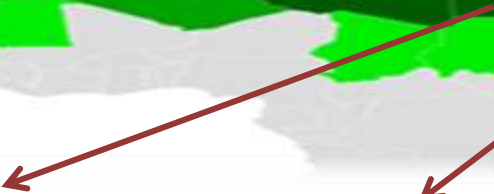
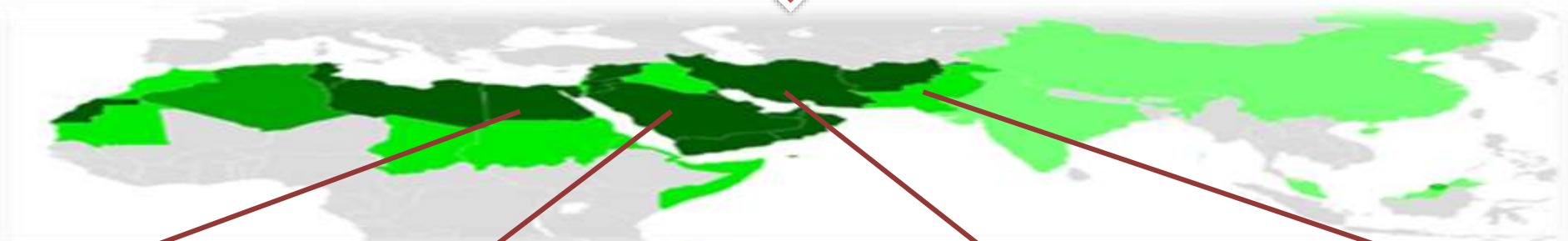
علي

U+0639
U+0644
U+06CC



Registrant will use his/her keyboard

بنك



بنك

U+0628
U+0646
U+0643

بنك

U+0628
U+0646
U+0643

بنك

U+0628
U+0646
U+06A9

بنك

U+0628
U+0646
U+06A9

Universal Acceptance of Arabic Domain Names

UA issues: User's perspective

End to end email connectivity

Social Media

DNS Hierarchy

Operating Systems

Spam filters

Security Software

Browsers

Search Engines

UA issues: Technical communities

Working with ASCII and Unicode equivalents

Working with DNS hierarchy

Different input devices (keyboards)

Web Hosting

Language specific issues (Right-to-left direction, display, interface)

Universal Acceptance : Arabic Script

Zero width joining characters (ZWJ)

Zero width Non joining characters (ZWNJ)

Combining marks

Bi Directional

Arabic Script TLDs Delegated

- | | | |
|------------|--------------|------------|
| 1. الجزائر | 8. بهارت | 15. تونس |
| 2. عمان | 9. المغرب | 16. مصر |
| 3. ايران | 10. السعودية | 17. قطر |
| 4. امارات | 11. سودان | 18. فلسطين |
| 5. بازار | 12. مليسيا | 19. عراق |
| 6. باكستان | 13. شبكة | 20. بازار |
| 7. الاردن | 14. سورية | 21. موقع |

Working test-cases sample

Pattern	Implementation Sample	Registered	Working	Conformity
RTL.ASCII	اختبار-القبولالعالمي.top	Yes	Yes	
RTL.RTL	مثال.السعودية	Yes	Yes	
RTL-RTL.RTL	اختبار-القبولالعالمي.شبكة	Yes	Yes	
RTL.RTL.RTL	فرع.مثال.السعودية	Yes	Yes	Yes
RTL-123.RTL.RTL	أرقام-123.مثال.السعودية	Yes	Yes	Yes



شكراً

شكریه

با سپاس

تشكر

ثريما كاسيه

Thanks