

Launching IDN ccTLD

السعودية.

(.alsaudiah)

Raed Al-Fayez
SaudiNIC - CITC



Agenda

About SaudiNIC

What we have done

What is Next

Lessons learned



About SaudiNIC

About SaudiNIC

Saudi Network Information Center



- SaudiNIC is a non-profit unit that is operated by Communication and Information Technology Commission (CITC) which is a semi-governmental entity.
- SaudiNIC administers the Saudi ccTLDs:
 - .sa since 1995.
 - The new IDN ccTLD (.السعودية) since May 2010
- Leading the local community efforts towards supporting Arabic language in DNS
 - Chairing both Steering and Technical Committees of the ADNPP

About SaudiNIC

Latest Achievements



- Full **IPv6 Support** – Jan 2010
- Open registration of **Arabic** domain names under “السعودية” (سجل.السعودية) – May 2010
- Open registration of domain names **directly** under “.sa” (nic.sa) – Jan 2011
- Updated the “**Domain Name Regulations**” – Apr 2011
- Updated “**Procedures for Submitting an Objection to Saudi domain names**” (Dispute Resolution) – Apr 2011

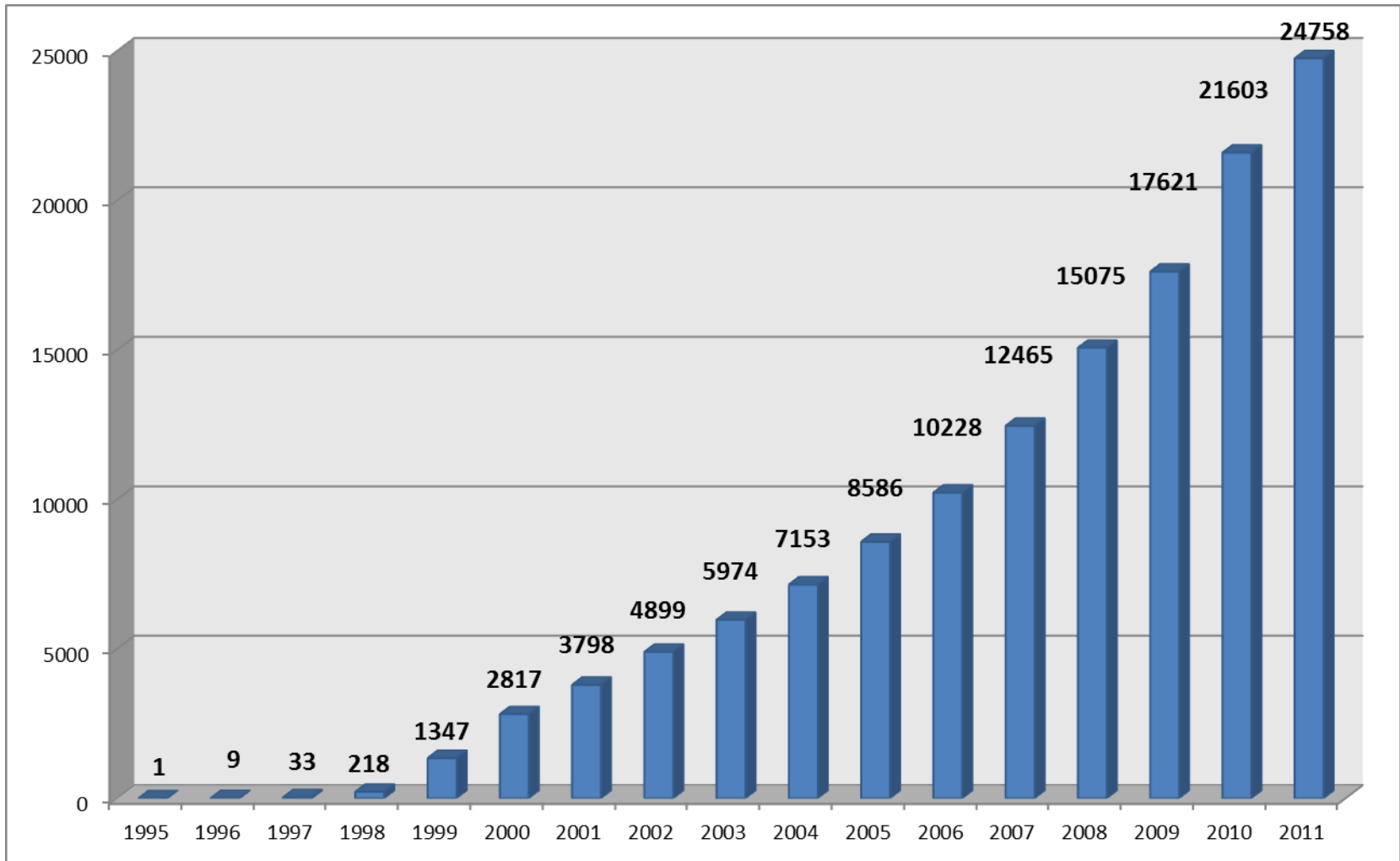
About SaudiNIC

Coming Projects

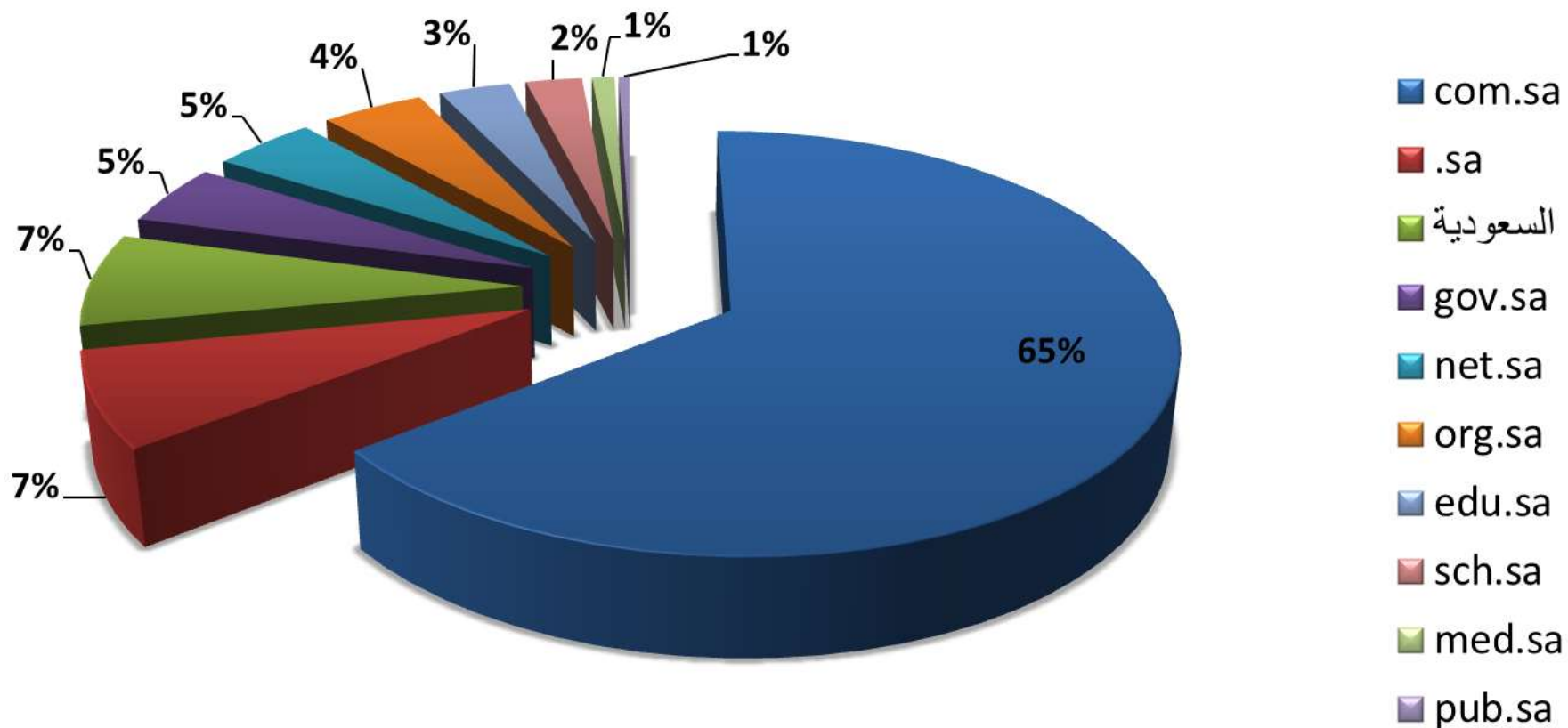


- Registry-Registrar model
- DNSSEC
- IDN Emails
- Testing and checking IDN implementation in well-known applications

About SaudiNIC Statistics



About SaudiNIC Statistics





What we have done? ... السعودية.

What we have done

String Evaluation and Delegation



16 Nov 2009

ICANN opened IDN
ccTLD FT Process



16 Nov 2009

Applying to fast
track process



20 Jan 2010

ICANN Approved
the String



5 May 2010

IANA added
xn--mgberp4a5d4ar
to the root servers



22 Apr 2010

IANA Approved the
Delegation



24 Jan 2010

Applying for
delegation



السعودية

What we have done Regulations and Guidelines



Arabic Domain Name Registration Regulation for Saudi ccTLD (المسجلة)

Version 1.0 Saturday 25/04/1431 H (10/04/2010)

1. Definitions

The terms and expressions defined in the Telecommunication Act and in its Bylaws shall have the same meaning in this regulation. In addition, the terms and expressions set out in this regulation shall have the following meanings assigned to each of them:

- SANDNIC:** Saudi Network Information Center at CITC is the registration authority for the Saudi ccTLDs. SANDNIC is responsible for providing Registration Services for the Saudi ccTLDs, as well as formulating and implementing policies procedures with regard to the Saudi ccTLDs and managing and operating their registries.
- Registration Services:** Services provided by SANDNIC related to the registration of a domain name, including but not limited to registration, modification, renewal, suspension, deletion or transfer of a domain name.
- Service Request:** An online form, available on the SANDNIC's website, used to request Registration Services. This includes actions taken by a Registrant on a password-protected area.
- Registrant:** A natural person or a legal entity that requested, or will request, directly or through a third party registration services, including the current holder of a domain name.
- Administrative Contact:** A natural person, based in Saudi Arabia, who is designated by the Registrant in the Service Request. The Administrative Contact shall be authorized to represent the registrant at SANDNIC and CITC for matters related to all domain names issues, including requesting and obtaining registration services, responding to domain name objections, and coordinating any financial matters. The Registrant must provide and maintain a valid and complete Administrative Contact's information, including a correct, valid and functional e-mail address.
- Domain Name:** refers to one or both of the standard two representations of an Arabic domain name:
 - The Arabic representation, composed of two Arabic labels separated by a dot (•) (نطاق المسجلة), where (المسجلة) always the first level from the left; or
 - The SANDNIC representation of the ARABIC labels converted to Latin.

Regulation for Opening Arabic Domain Name Registration under the IDN ccTLD (المسجلة)

Version 2.0 Saturday 25/04/1431 H (10/04/2010)

1. Definitions

The terms and expressions defined in the Telecommunication Act and in its Bylaws as well as in the Regulation for Arabic Domain Name Registration under the IDN ccTLD (المسجلة) shall have the same meaning in this regulation. In addition, the terms and expressions set out in this regulation shall have the following meanings assigned to them:

- This Regulation:** This Regulation that regulates the opening of the Arabic Domain name registration under the IDN ccTLD (المسجلة).
- SANDNIC:** Saudi Network Information Center at CITC is the registration authority for the Saudi ccTLDs. SANDNIC is responsible for providing Registration Services for the Saudi ccTLDs, as well as formulating and implementing policies procedures with regard to the Saudi ccTLDs and managing and operating their registries.
- Service Phase:** The period extending from 10:00 AM on Monday the 17th of Jumada 1431 H (13th of May 2010 G), to 10:00 AM on Monday the 30th of Rajab 1431 H (12th July 2010 G), during which SANDNIC shall accept applications for registration of Arabic domain names from members of the general public. The Launch phase starts from 10:00 AM on Monday the 18th Shawal 1431 H (7th September 2010 G).
- Qualified registrant:** An entity or individual who has a registered trade name or mark with Ministry of Trade and Industry in Saudi Arabia, including all governmental or semi-governmental authorities and organizations.
- ADNR:** The Arabic Domain Name Regulation under the IDN ccTLD (المسجلة), which is published on SANDNIC's website.

Saudi Domain Names Objection Rules and Procedures

Version 2.0 Saturday 25/04/1431 H (10/04/2010)

1. Definitions

The terms and expressions defined in the Telecommunication Act, its bylaws and the Regulations for Saudi Domain Name Registration shall have the same meaning in this document. In addition, the words and expressions set hereunder in this document shall have the meanings assigned below:

- This Document:** this Saudi Domain Names Objection Rules and Procedures, including any future approved amendments or additions.
- SANDNIC:** Saudi Network Information Center at CITC is the registration authority for the Saudi ccTLDs. SANDNIC is responsible for providing Registration Services for the Saudi ccTLDs, as well as formulating and implementing policies procedures with regard to the Saudi ccTLDs and managing and operating their registries.
- Decision:** any decision issued by SANDNIC related to the registration services.
- Saudi domain names:** domain names registered under the Saudi ccTLDs, and managed by SANDNIC.
- Objecting parties:** include both the objector and defendant (each of which is referred to as party).

2. The Scope of this Document

- This document sets the rules and procedures govern the objections on Saudi domain names.
- CITC jurisdiction to implement this Document is limited to the objections in connection with SANDNIC.

Main Registration Regulation

Regulation for Opening ADN Registration

Objection Rules and Procedures

Procedures Governing Reserved Names Under Saudi Domain Names

Version 1.0 Date 10/5/1431 H (24/4/2010)

1. Scope of procedures

This document establishes procedures for creating a list of reserved names under Saudi domain names, and a mechanism for managing this list.

2. Definitions

The terms and expressions defined in the Telecommunication Act, its bylaws and the Regulations for Saudi Domain Name Registration shall have the same meaning in this document. In addition, the words and expressions set hereunder in this document shall have the meanings assigned below:

- Domain name:** a word or phrase used to access Internet services, rather than the numerical address.
- Reserved name:** a word or phrase that is prohibited to be used in Saudi domain names, according to the criteria set in these procedures.
- The List:** a list of reserved names prepared under these procedures.

3. List of Reserved names

- SANDNIC establish the List that includes reserved names in the following categories:
 - Geographical, such as names of cities, governmental regions and countries.
 - Absolute numbers and letters. This includes any one letter or any group of 5 digits or less.
 - Confusing words or terms that include critical text such as (www, http, mail, www, Saudi, or Bank, and etc).
 - Religious: It includes names of religions and sects, sacred places, names and attributes of Allah and the names of the prophets and apostles.
 - Inappropriate: It includes words and terms that present an attack on the religion, homeland, or citizens, or they offend public decency.

مبادئ توجيهية لصياغة أسماء النطاقات العربية

ضمن النطاق العربي (السعودية)

الإصدار 1.0، تاريخ 10/5/1431 هـ الموافق 24/4/2010 م

مقدمة:

تعتبر هذه الوثيقة لتحديد الرموز المسموح استخدامها عند تسجيل أسماء نطاقات عربية ضمن النطاق العلوي العربي السعودي (السعودية). أيضا تضع هذه الوثيقة جملة من الإرشادات والقواعد تساعد على كتابة أسماء النطاقات العربية بشكل صحيح محددين في الاعتبار الموضوع التي تفس اللغة أو الحرف العربي، يكون للمصطلحات والتأجيل المعرفة في ثلاثة تسجيل أسماء النطاقات العربية نفس المعنى المحدد لها في تلك الثلاثة عند استخدامها هنا في هذه الوثيقة والخصوص المصطلحات التالية:

- اسم نطاق:** يطلق على أي من الصيغتين القياسية أو كلاهما المستخدمة لتمثيل أسماء النطاقات باللغة العربية طبقا للمواصفات القياسية الدولية الخاصة بأسماء النطاقات المدونة بحيث تكون:
 - الصيغة الأولى باللغة العربية؛ وهي عبارة عن اسم مكون من مقطعين عربيين مقصود.

Criteria to Demonstrate Reasonable Relationship between a Domain Name and a Registrant

Version 1.0 Date 05/20/1431 AM 04/05/2010

Introduction:

- Applying the text of paragraph (7/3) of the regulation of domain name registration in Saudi Arabia, which requires that the domain name should have some reasonable relationship to the Registrant. This document shows some criteria to demonstrate this relationship, without prejudice to the terms and conditions mentioned in the registration regulations.
- Criteria identified in this document are guidelines that are made available to help the registrant to select a domain name to be registered. They are not binding on SANDNIC, and they do not give the Registrant any rights to preserve the domain name or infringement on the rights of others.

Criteria:

- The label should be an exact match of the registrant's name.**
An "exact match" is where the label of a requested domain name matches one or more of the words comprising the name used by the registrant to establish their eligibility. The words must be used in the same order as they appear in the name. Furthermore, it should represent the name without confusion. It should not match a full name of other entity or a generic word.

Procedures Governing Reserved Names

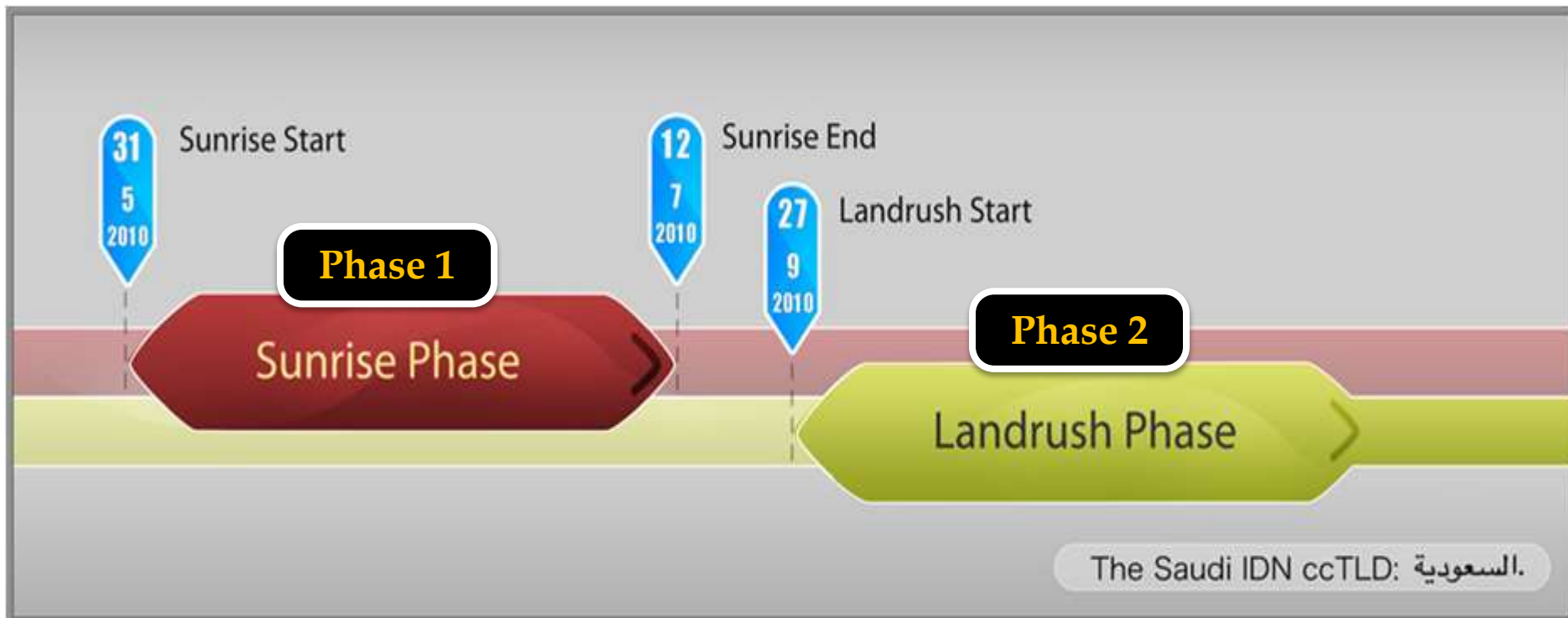
Guideline for writing ADNs

Criteria to Demonstrate Reasonable Relationship between a Domain Name and a Registrant

What we have done

Opening Registration Plan

- We announced our Registration Plan (2 phases) on
– 15 April 2010



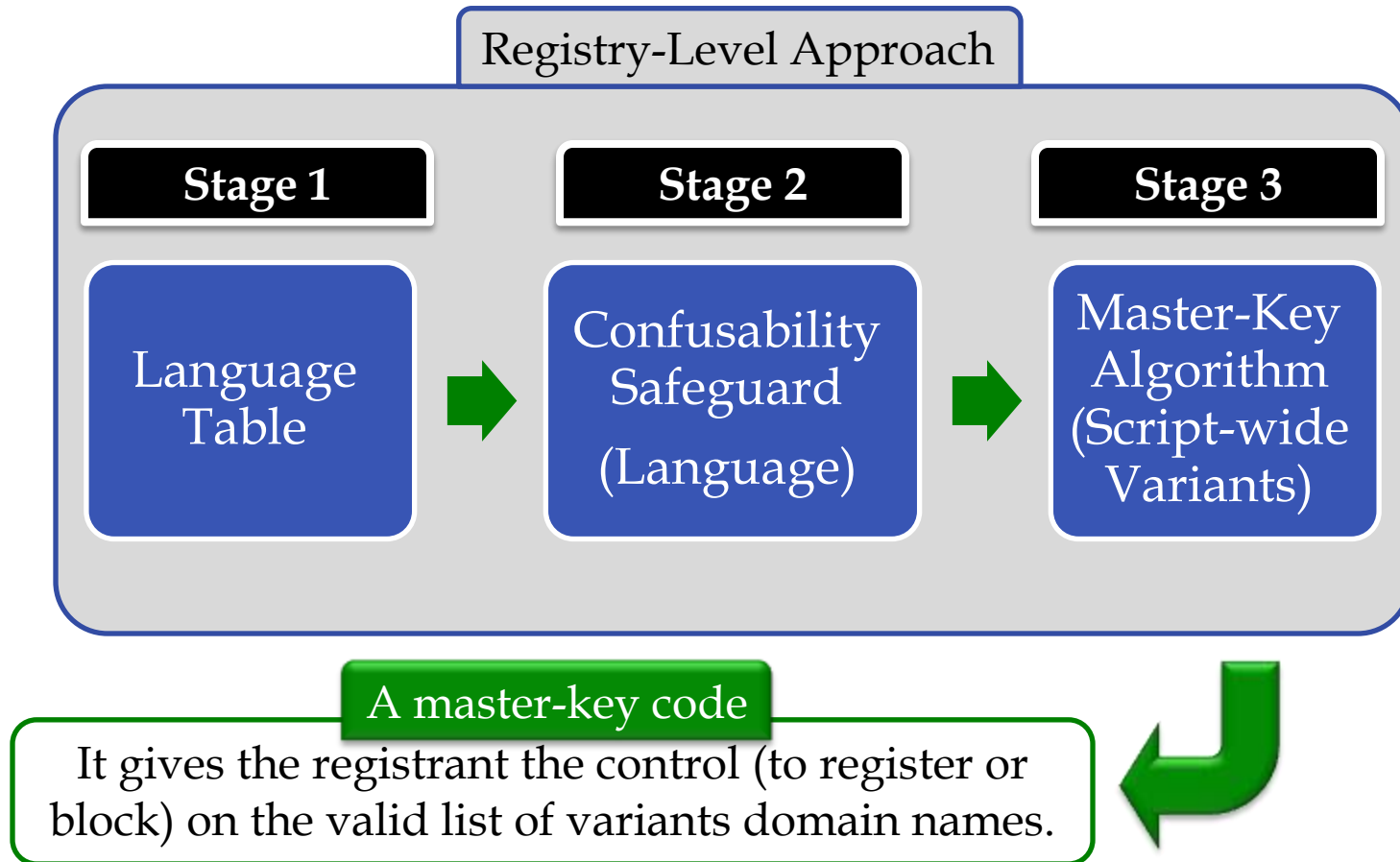
What we have done

Technical Enhancements

- **Rebuilt the registration system to support (in-house)**
 - Arabic IDN
 - IDN Variants (Master-key Algorithm)
- **Increased Connection BW and installed new servers**
- **Implemented Anycast and IPv6 on our DNS servers**
- **Build some tools & scripts related to IDN**
 - IDNA 2003 & IDNA2008 implantations
 - DNS checker & Zone editor
 - Zone builder and Whois

What we have done

Developed a Registry-level Approach



What we have done

Developed a Registry-level Approach



Stage 1: Defining Language-Table

- List all supported code points that will be used in our IDN ccTLD (السعودية).
 - Based on the **RFC# 5564** (Linguistic Guidelines for the Use of the Arabic Language in Internet Domains)
 - Letters: From (أ) to (ي)
 - Numbers: From (٠) to (٩) & (0) to (9)
 - Others: Hyphen (-) & Dot(.)
- This will help in solving the following issues:
 - Valid Unicode Codepoints
 - Non-spacing Marks
 - Combining Marks
 - ZWNJ/ZWJ
 - Digit (partial)

Network Working Group
Request for Comments: 5564
Category: Informational

A. El-Sherbiny
M. Farah
UN-ESCWA
I. Oueichek
Syrian Telecom Establishment
A. Al-Zoman
SaudiNIC, CITC
2009

	0600	0601	0602	0603	0604	0605	0606	0607	0608	0609	060A	060B	060C	060D	060E	060F
0	ا	ب	ت	ث	ج	ح	خ	د	ذ	ر	ز	س	ش	ص	ض	ط
1	ظ	ق	ك	ل	م	ن	هـ	و	ي	آ	إ	أ	ؤ	ئ	ة	ـ
2	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
3	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
4	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
5	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
6	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
7	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
8	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
9	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
A	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
B	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
C	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
D	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
E	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ
F	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ	ـ

What we have done

Developed a Registry-level Approach



Stage 2: Language Confusability Safeguard

- Provide a phishing protection layer (Emlaa Key Algorithm) to handle issues within the language such as:

– Characters that have many shapes (ي ي) (ه ه) (أ إ آ):

أحمد & أحمد

– Similarities between Letter HEH (ه) and Number Five (٥):

بريد ه & بریده

– Similarities between Letter ALEF(ا) and Number one (١)

رائد & رائد

– Digit mixing

مؤتمر ٢٠١٠ & مؤتمر ٢٠1٠



What we have done

Developed a Registry-level Approach



Stage 3: Master-Key Algorithm

- SaudiNIC developed an algorithm (Master Key Algorithm) that can be used at the registry level.
- It will safely allow users to register a domain name using the allowed characters (from the language table) and at the same time protect the possible variants (across the script) in other languages (Arabic, Farsi, Urdu ..etc)
- Transparent to end users

What we have done Developed a Registry-level Approach



Registry (demo) السجل (تجريبي)

Type a domain name مكية اسم النطاق
 TLD مثال . النطاق العلوي

Records السجلات Matches المتشابهات Key المفتاح Register سجل

Domain Chars	أحرف النطاق	Domain	النطاق
النطاقات من لغة واحدة ومتماثلة 2			
G31A,G29B,G36B,G9C	(U+0645)(U+0643)(U+064A)(U+0629)	مكية	مثال
G31A,G29B,G36B,G9C	(U+0645)(U+06A9)(U+06CC)(U+0629)	مكية	مثال
النطاقات من لغة واحدة ومتماثلة 1			
G31A,G29B,G36B,G9C	(U+0645)(U+06A9)(U+06CC)(U+06C3)	مكية	مثال
النطاقات من عدة لغات ومتماثلة 2			
G31A,G29B,G36B,G9C	(U+0645)(U+06A9)(U+064A)(U+0629)	مكية	مثال
G31A,G29B,G36B,G9C	(U+0645)(U+0643)(U+06CC)(U+0629)	مكية	مثال
النطاقات من عدة لغات ومتماثلة 23			
G31A,G29B,G36B,G9C	(U+0645)(U+06AA)(U+064A)(U+0629)	مكية	مثال
G31A,G29B,G36B,G9C	(U+0645)(U+0643)(U+067B)(U+0629)	مكية	مثال
G31A,G29B,G36B,G9C	(U+0645)(U+0643)(U+06D0)(U+0629)	مكية	مثال

Registry (demo) السجل (تجريبي)

Type a domain name مكية اسم النطاق
 TLD مثال . النطاق العلوي

Records السجلات Matches المتشابهات Key المفتاح Register سجل

OK, The domain registered. Domain Details:

Domain Chars	أحرف النطاق	Domain	النطاق
G31A,G29B,G36B,G9C	(U+0645)(U+0643)(U+064a)(U+0629)	مكية	مثال

Registry (demo) السجل (تجريبي)

Type a domain name مكية اسم النطاق
 TLD مثال . النطاق العلوي

Records السجلات Matches المتشابهات Key المفتاح Register سجل

The domain is already registered! Domain details:

Domain Chars	أحرف النطاق	Domain	النطاق
G31A,G29B,G36B,G9C	(U+0645)(U+06a9)(U+06cc)(U+06c3)	مكية	مثال

What we have done

Basic Rules for writing Arabic domains



- The Arabic Label should be at least **2** symbols.
- The Arabic Label should have a **corresponding valid** ASCII Label
- A label should **not start or end** with a **dash** “-“ and should not have **two consecutive dashes**.
- The symbols representing the Arabic Label should comply with **terms and conditions specified by SaudiNIC** which include **permitted characters and symbol** to be used in registering Arabic domain names.

What we have done

Guideline Rules for writing Arabic domains

- Guideline Rules for writing Arabic IDNs under (.السعودية) IDN ccTLD
- Consists of:
 - Language Table
 - 7 Rules

قواعد إرشادية لصياغة أسماء النطاقات العربية

ضمن النطاق العربي

(.السعودية)

الإصدار ١.٠ (تاريخ ١٤٣١/٥/٢٠ هـ الموافق ٢٠١٠/٥/٤م)

مقدمة:

تعني هذه الوثيقة بتحديد الرموز المسموح استخدامها عند تسجيل أسماء نطاقات عربية ضمن النطاق العلوي العربي السعودي (.السعودية). أيضا تضع هذه الوثيقة جملة من الإرشادات والقواعد تساعد على كتابة أسماء النطاقات العربية بشكل صحيح أخذين في الاعتبار المواضيع التي تمس اللغة أو الحرف العربي، يكون للمصطلحات والتعابير المعرفة في لائحة تسجيل أسماء النطاقات العربية نفس المعنى المحدد لها في تلك اللائحة عند استخدامها هنا في هذه الوثيقة وبالأخص المصطلحات التالية:

• اسم نطاق: يطلق على أي من الصيغتين القياسيتين أو كلاهما المستخدمة لتمثيل أسماء النطاقات باللغة العربية طبقا للمواصفات القياسية الدولية الخاصة بأسماء النطاقات المدولة بحيث تكون:

○ الصيغة الأولى باللغة العربية: وهي عبارة عن اسم مكون من مقطعين عربيين مفصولين

What we have done

Guideline Rules for writing Arabic domains

- **Rule #1:** Diacritics are not allowed



سَجَل.السعودية



سجل.السعودية

What we have done

Guideline Rules for writing Arabic domains

- **Rule #2:** No mixing between scripts (Arabic & Latin)

✘ موقع-SaudiNIC.السعودية

✘ SaudiNIC.السعودية

What we have done

Guideline Rules for writing Arabic domains

- **Rule #3:** Use of hyphen (instead of space) between words particularly if the 2 words will get connected



هيئة الاتصالات .السعودية



هيئة-الاتصالات .السعودية



مدارس-خيف .السعودية



مدارسخيف .السعودية

What we have done

Guideline Rules for writing Arabic domains

- **Rule #4:** Hyphen can not be used at the beginning or end of a label and 2 or more consecutive hyphens are not allowed

✘ مثال (e.g.) : -هيئة الاتصالات.السعودية

✘ مثال (e.g.) : هيئة الاتصالات-.السعودية

✘ مثال (e.g.) : هيئة--الاتصالات.السعودية

What we have done

Guideline Rules for writing Arabic domains

- Rule #5:** Digits can not be used at the beginning or end of a label. Digits can be used inside a label from the 2 sets without mixing.



999.السعودية

اتصل ٩٩٩.السعودية

9٩9 للنجدة.السعودية

اتصل ٩9٩ للنجدة.السعودية

اتصل 999 للنجدة.السعودية

It is permitted to register other variants of the domain name that can be formulated just by changing the digit set



اتصل ٩٩٩ للنجدة.السعودية

What we have done

Guideline Rules for writing Arabic domains

■ Rule #6: Variants within the language

- Characters that have many shapes (ي ي) (ه ه) (أ إ آ ا)

It is permitted to register the other variants names that can be created just by changing the confusingly similar characters provided that it does not infringe on the rights of others



مثال (e.g.) : شبكة-الأخبار.السعودية

It is permitted to register the other variants



مثال (e.g.) شبكة-الاخبار.السعودية

مثال (e.g.) شبكه-الأخبار.السعودية

مثال (e.g.) شبكه-الاخبار.السعودية

What we have done

Guideline Rules for writing Arabic domains

- **Rule #7: Variants within the script**

It is permitted to register the Variants within the Arabic Script that will allow the Arabic domain names to be used globally despite the fact that some other languages that use the Arabic script (such as Urdu, Farsi, Pashto, ...) might have characters that look confusingly similar to some of the Arabic characters. This also takes care of the problem of having different input devices (e.g., keyboards) used within the Arabic script communities.

(all characters are from the Arabic Language)



مكة.السعودية

(the letter KAF and THE MARBUTA are from Urdu)



مكة.السعودية

(the letter KAF and THE MARBUTA are from Urdu)



مكة.السعودية

What we have done Awareness and Support

- Videos
- Documents
- Guidelines
- Support
- Training
- Blog



هيئة الاتصالات وتقنية المعلومات
Communications and Information Technology Commission

المركز السعودي لمعلومات الشبكة
Saudi Network Information Center

English النطاقات العربية الدعم الفني الخدمات قواعد ونظيقات عن المركز صفحة البداية

معايير تحديد العائلة بين اسم النطاق والمسجل

الاصدار (١٠٠ تاريخ ١٤٢١/٥/٢٠ هـ الموافق ٢٠٢٠-٠١-٢٠)

لهيئة

١- تتسلف نفس العفرة (T/V) من قواعد تسجيل أسماء النطاقات فن الهيئكة العربية السعودية التي تشترط وجود رابط بين اسم النطاق والمسجل. امين هذه الوائفة معايير استرشادية لتحديد العائلة بين اسم النطاق والمسجل عند طلب تسجيل اسم نطاق. وذلك مع عدم الإحلال بالمشروط والأحكام المذكورة فن لوائح التسجيل.

٢- المعايير التي يبنينا هذه الوائفة هي معايير استرشادية للاستئناس بها عند اختيار اسم النطاق المراد تسجيله وهي معايير كثير مفرقة للمركز. كما لا ننسى علينا أي حقوق فن العائلة على الاسم المسجل أو فن العائلي على حقوق الأخرين.

المعايير:

١ - أن يكون اسم النطاق مطابقاً لاسم المسجل ويدل عليه

ويمكن أن يتحقق ذلك عندما يكون المقطع من اسم النطاق المطلوب تسجيله يطابق تماما كلمة واحدة أو أكثر من الاسم الذي استخضعه المسجل ليست أهلية لتسجيل بنفس الترتيب. وذلك عليه من نوا ليس. وألا يطابق اسم جهة أخرى، وأن لا يقبل كلمة عامة.

٢ - أن يمثل اسم النطاق اختصاراً منطقياً لاسم المسجل

قد ينطبق هذا المعيار بشكل أكبر على أسماء النطاقات باللغة الإنجليزية أكثر منها على اللغة العربية حيث تشير الكلمة في اللغة العربية بعدد قائلتها للاختصار أو الجزئية. ولذلك فلا يوجد بها كثير من الاختصارات. ويمثل الاختصار في الكلمات المصغرة أو المصغرة (abbreviations) أو الكلمات الأولية (acronyms). ويمكن بيان هذا المعيار وفق التفصيل التالي:

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What is Next ? ... السعودية.

What is next?

IDN TLD variants

Visit our website:
Makkah.sa



There is a need to enable TLD Variants

Delegating IDN variants to our clients can not happen without getting the TLD variants.



مكة.السعودية ك (0643)



مكة.السعودية ك (06A9)



What is next?

IDN Support in Applications

- **IDN support in any users applications:**
 - email, chat, search engines, ...
- **User friendly applications:**
 - Display the (U-Label) to the user (NO A-label display)
 - Handel Right to Left correctly ... better readability of the address bar
 - Recognize IDN (U-Label) as a hyperlink
 - Transparent to the user (discouraging the A-label display)
 - Converting “spaces” to Dashes



Lessons learned

Lessons learned

- **TLD variants are a must-have!**
 - Reaching IDN domains from any place
- **Hosting Companies (local and global) dose not support new IDN TLDs**
 - Need more awareness and coordination
- **Still there are some issues with IDN applications**
 - Need to test each application version for Right-to-Left compatibilities and follow-up with their vendors
 - Generation technical reports (testing applications)
 - Attending IDN Software Developer's Consortium
- **Marketing is a must!**
 - We will deploy Registry-Registrar model soon



Thank you

شكرا

For more information you can visit:

www.nic.sa

للمزيد من المعلومات يمكنكم زيارة:
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