

# Launching IDN ccTLD

“السعودية”

**Abdulaziz Al-Zoman**  
**Director of SaudiNIC - CITC**

# Agenda



Pre-IDN  
ccTLD Fast  
Track

String  
evaluation  
and  
delegation

Technical  
and  
Logistical  
Preparation

Are we  
Done?  
What is  
Next?



# ***About SaudiNIC***

# About SaudiNIC

- 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.)
- Leading the local community efforts towards supporting Arabic language in DNS
  - Chairing both Steering and Technical Committees of the ADNPP



# ***Pre-IDN ccTLD Fast Track***

# Pre-IDN ccTLD Fast Track Readiness

- In 28 Oct 2008, our response to ICANN survey regarding participation on the IDN ccTLD FT:

**We are ready from day one!**

## Questions for Each Territory

Please read the page titled "Important Background Information" before completing this questionnaire

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1. Is your territory interested in obtaining an IDN ccTLD during the fast-track process?

Yes  No

2. Do you know what the IDN ccTLD domain name(s) is/are likely to be?

Yes  No

If yes, please specify the IDN ccTLD domain name(s) in your official language and in English.

String: السعودية Language: Arabic Script: Arabic

Unicode: u+0627 u+0644 u+0633 u+0639 u+0648 u+062F u+064A u+0629

Puny code: xn--mgberp4a5d4ar English Translation: saudia

3. If no, what official language(s) and script(s) would be used?

Language: \_\_\_\_\_ Script: \_\_\_\_\_

Language: \_\_\_\_\_ Script: \_\_\_\_\_

Language: \_\_\_\_\_ Script: \_\_\_\_\_

Could you estimate the timeframe within which your territory is likely to have concluded its preparation and be ready to participate in the fast-track process? (Use half year time blocks as a rough estimate.)

**We are ready from day one!**

Please check this box if you **do not** wish this information to be published on ICANN's website.



# **Pre-IDN ccTLD Fast Track**

## **What has been done ?**

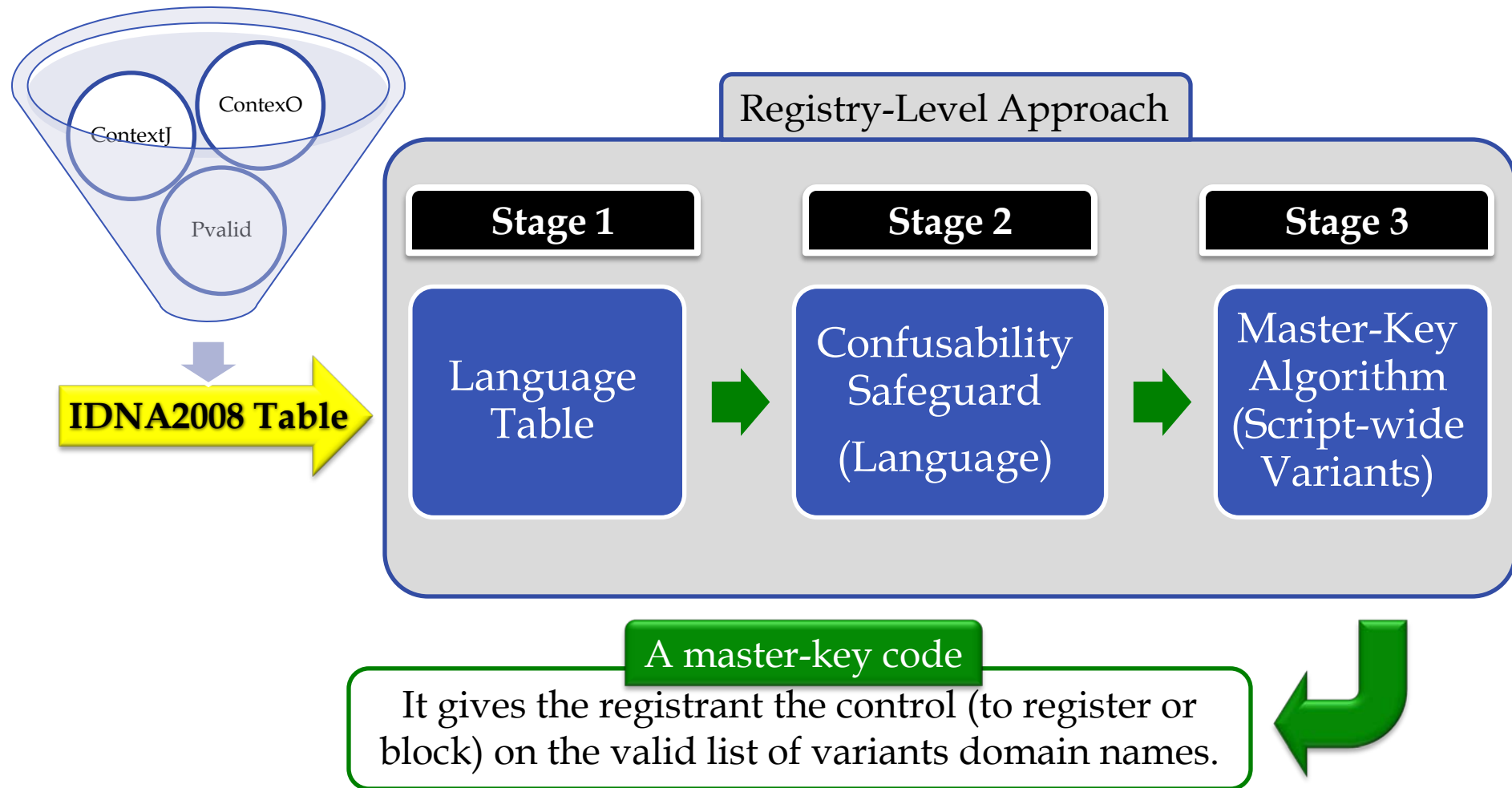


- **Led and helped building Pan-Arab cooperation**
  - Arab Team for Domain Names and Internet Affairs (Under the Arab League)
  - Arabic Domain Name Pilot Project (2005-2009)
- **Resolved most language linguistic issues**
- **Built local technical capabilities (~ 10 years)**
  - Lead the local and regional technical ADN development
    - Chairing both Steering and Technical Committees of the ADNPP
  - Gained experience and knowledge of using Arabic domain names
  - Built the local awareness about Arabic domain names.
  - Developed some tools required for Arabic domain names and DNS.
  - Developed a technical solution addressing Arabic Script Variants
  - Developed some guideline policies.
- **Shared all the above with the Internet community.**



# Pre-IDN ccTLD Fast Track

## Developed a Registry-level Approach





# Pre-IDN ccTLD Fast Track

## Developed a Registry-level Approach



### Stage 1 Defining Language Table

- We led and helped publishing a reference document that lists all supported code points that will be used in Arabic domain names.
- FRC 5564: Linguistic Guidelines for the Use of the Arabic Language in Internet Domains
  - Letters: From (أ) to (ي)
  - Numbers: (0) to (9) & (٠) to (٩)
  - Others: Hyphen (-) & Dot(.)
- This will help in solving the following issues:
  - Valid Unicode Codepoints
  - Non-spacing Marks
  - Combining Marks
  - ZWNJ/ZWJ
  - Digit (partial)

http://www.rfc-editor.org/authors/rfc5564.txt - Microsoft Internet Explorer provided by CITC

RFC http://www.rfc-editor.org/at

RFC Arabic language

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  
May 2009

Linguistic Guidelines for the Use of  
the Arabic Language in Internet Domains

Status of This Memo

This memo provides information for the Internet community. It does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

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[www.rfc-editor.org/authors/rfc5564.txt](http://www.rfc-editor.org/authors/rfc5564.txt)

# Pre-IDN ccTLD Fast Track

## Developed a Registry-level Approach



### Stage 2 Confusability Safeguard

- Provide a phishing protection layer (Emlaa Key Algorithm) to handle issues like:

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

أحمد & احمد

- Similarities between Letter HEH (ه) and Number Five (5):

بريد5 & بريده

- Similarities between Letter ALEF(ا) and Number one (1)

ر1ئ & رائد

- Digit mixing

مؤتمر2010

مؤتمر1020

# Pre-IDN ccTLD Fast Track

## Developed a Registry-level Approach



### Stage 3 Handling Script-wide Variants

- 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 in other languages (Arabic, Farsi, Urdu ..etc)
- Transparent to end users

IDN Registry Demo - Mozilla Firefox

File Edit View History Bookmarks Tools Help

### Registry (demo) السجل (تجريبي)

Type a domain name	مكية	اسم النطاق
TLD	مثال .	النطاق العلوي
Records السجلات Matches المتشابهات Key المفتاح Register سجل		
The Key المفتاح	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 ومتشابهة 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 ومتشابهة 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



# ***String Evaluation and Delegation***

# 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



6 May 2010

IANA added xn--mgberp4a5d4ar to the root servers



22 Apr 2010

IANA Approved the Delegation



24 Jan 2010

Applying for delegation



السعودية



# ***String Evaluation and Delegation*** ***Notes and Comments***



- **In general the string evolution process was straight forward process, while the delegation process was a surprise to us.**
  - It might be worth to integrate them together (at least for the paper work .. and more coordination between ICANN & IANA become visible)
- **The communication experience during the delegation process was not as expected:**
  - no updates unless we ask (many times).
  - most responses look like that they are machine generated emails.
  - delegation was done by surprise ... “Hey your delegation was done yesterday “





# ***Technical and Logistical Preparation***



# Technical and Logistical Preparation Policy Development Process



- Drafting and approval of registration regulations followed SaudiNIC PDP

	Issue Identification	Prioritization	Initial Report	Public Consultation	Recommendations	Final Report	Final Approval
CITC Board	Identify issues						Approve policy
CITC-MC	Identify issues	Direct prioritization		Approve consultation process	Review draft policy report and provide input	Endorse final policy report and request Board approval	
SaudiNIC	Prepare the list of issues and their scope	Prioritize issues	Prepare an initial report/ study	Prepare consultation documents and reports	Prepare draft policy report	Prepare final policy report	Implement approved policies
Stakeholders	Identify issues			Submit comments			
Public	Identify issues			Submit comments			

# Technical and Logistical Preparation Published Regulations and Guidelines



## Arabic Domain Name Registration Regulation for Saudi ccTLD (السعودية)

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 Bylaw 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:
- SaudiNIC:** Saudi Network Information Center at CITC is the registration authority for the Saudi ccTLDs. SaudiNIC 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 SaudiNIC 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 SaudiNIC'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 SaudiNIC 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 (e.g. موقع السعودية) where (موقع السعودية) is always the first level from the left; or
    - The ASCII representation: composed of two ASCII labels separated by

## Regulation for Opening Arabic Domain Name Registration under the IDN ccTLD "السعودية"

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 Bylaw as well as in the Regulation for Arabic Domain Name Registration under the IDN ccTLD (السعودية) 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 regulate the opening of the Arabic Domain name registration under the IDN ccTLD "السعودية".
  - SaudiNIC:** Saudi Network Information Center at CITC is the registration authority for the Saudi ccTLDs. SaudiNIC 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.
  - Swatze Phase:** The period extending from 10:00 AM on Monday the 17th of JumadaII 1431 H (11th of May 2010 G), to 10:00 AM on Monday the 30th of Rajab 1431 H (12th July 2010 G), during which SaudiNIC shall accept applications for registration of Arabic domain names from Qualified Registrants.
  - Launch Phase:** The phase when SaudiNIC shall begin accepting 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 Sha'wan 1431 H (27th 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 (السعودية) , which is published on SaudiNIC'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.
  - SaudiNIC:** Saudi Network Information Center at CITC is the registration authority for the Saudi ccTLDs. SaudiNIC 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 SaudiNIC related to the registration services.
  - Saudi domain names:** domain names registered under the Saudi ccTLDs, and managed by SaudiNIC
  - Objecting parties:** include both the objector and defendant (each of which is referred to as party).
- 2. The Scope of this Document**
- 2/1 This document sets the rules and procedures governs the objections on Saudi domain names
- 2/2 CITC jurisdiction to implement this Document is limited to the objections in connection with following:

## 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

3/1 SaudiNIC establish the List that includes reserved names in the following categories:

- Geographical:** such as names of cities, governorates, 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 (Saudi, Saudi, Saudi), or (bank, bank, 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 other persons, or they offend public decency.

## واعد إرشادية لصياغة أسماء النطاقات العربية

### ضمن النطاق العربي

### (السعودية)

الإصدار ١.٠ (تاريخ ١١/٥/٢٠١٠ الموافق ١٤٣١/٥/٢٠هـ)

### مقدمة:

تعنى هذه الوثيقة بتحديد الرمز المسموح استخدامه 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 آخذين في الاعتبار الموضوع التي تفس اللغة أو الحرف العربي. يكون للمصطلحات والتأجيل المعرفة في لائحة تسجيل أسماء النطاقات العربية نفس المعنى المحدد لها في تلكم اللائحة عند استخدامها هنا في هذه الوثيقة والخصوص 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 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 AH 04/05/2010

### Introduction:

1. 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. |

2. 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 SaudiNIC, and they do not give the Registrant any rights to preserve the domain name or infringement on the rights of others.

### Criteria:

#### 1: 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 ADN

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

# **Technical and Logistical Preparation**

## **Technical**

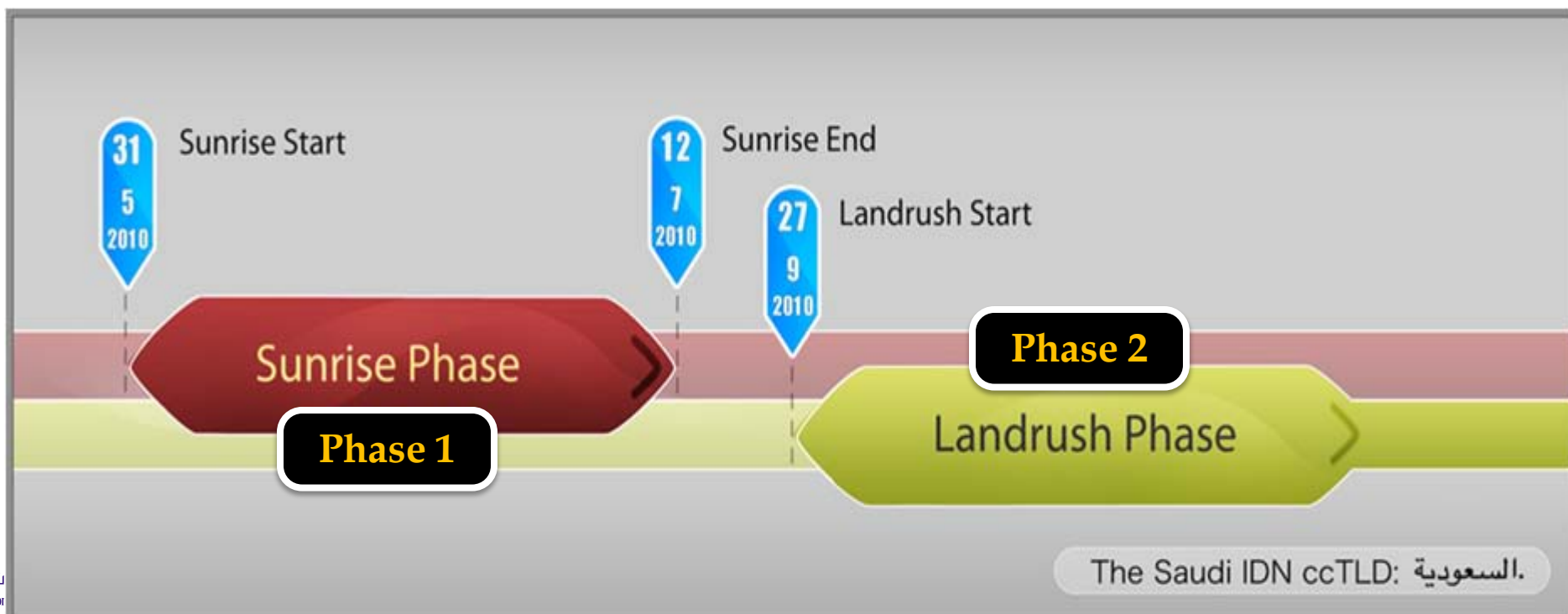


- **Rebuilt (in-house) the registration system to support**
  - Arabic IDN
  - IPv6
- **Increased Connection BW and installed new servers**
- **Implemented Anycast and IPv6 on our DNS servers**
- ...

# Technical and Logistical Preparation Opening Registration Plan



- We announced our Registration Plan (2 phases) on
  - 15 April 2010
- We launched Saudi Arabic domain names on
  - 6 May 2010





# ***Are we Done? ... What is Next?***



# IDN is NOT Accomplished If TLD variants are not SUPPORTED



Visit our website:  
Makkah.sa

مكة السعودية  
قم بزيارة:



**There is a need to enable TLD Variants**  
Delegating IDN variants to our clients can not happen without getting the TLD variants.



ك (0643)

مكة السع



ك (06A9)

مكة والسيف

# ***IDN Support in Applications***



- **TLD variants are a must-have!**
- **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





*Thank you*

شكرا

U+0634 U+06A9 U+0631 U+0627

شكرا

U+0634 U+0643 U+0631 U+0627

**G35B G44M G32F G22I**