

# Assessment of IDNA User Experience

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1-Apr-2015, MENOG15



# Agenda

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- Introduction
- Methodology
- Results
- Examples
- What's Next
- Conclusion



Intro

سجل.السعودية .sa

المركز السعودي لمعلومات الشبكة .sa

التسجيل الدخول التسجيل

أرشيف الوثائق خارطة الموقع عن المركز اتصل بنا ابحث في الموقع

المركز السعودي لمعلومات الشبكة  
Saudi Network Information Center

النطاقات العربية أدوات الأنظمة الشاتعة أدلة الخدمات لوائح و قواعد الرئيسية

## الآن يمكنك تسجيل نطاقك باللغة العربية

www.bigchallengeonus.com www.imlatetobeontime.com  
www.ourhouseispainted.com www.hearmyvoiceclearly.com  
www.mychairisbroken.com www.bigchallenge.com www.lknow  
www.ihavenosleepwholeday.com www.wheredoileave.com  
www.dothebestyoucantosucceedoittohelp.com  
www.handwashingisgood.com www.imlatetobeontime.com  
www.itisaamazingdinnerplan.com www.illdothebest  
www.bethebestyouwant.com www.smalltimecompany.com  
www.hedoittohelp.com www.hed

ابحث عن نطاق Whois أو نطاق

### أخبار المركز

مشاركة المركز في الاجتماع الأخير لجمعية (APTLD)  
إطلاق حملة تصحيح النطاقات التي لم تضم إلى حسابات (ضم النطاق)  
الانتقال إلى مبنى هيئة الاتصالات وتقنية المعلومات الجديد

### عن المركز

المركز السعودي لمعلومات الشبكة (SaudiNIC) جهة غير ربحية مختصة بتسجيل أسماء النطاقات في المملكة العربية السعودية. المركز مسؤول عن إدارة أسماء النطاقات الواقعة تحت النطاقات العلوية الدولية الخاصة بالمملكة العربية السعودية (.sa، .السعودية).



# Introduction

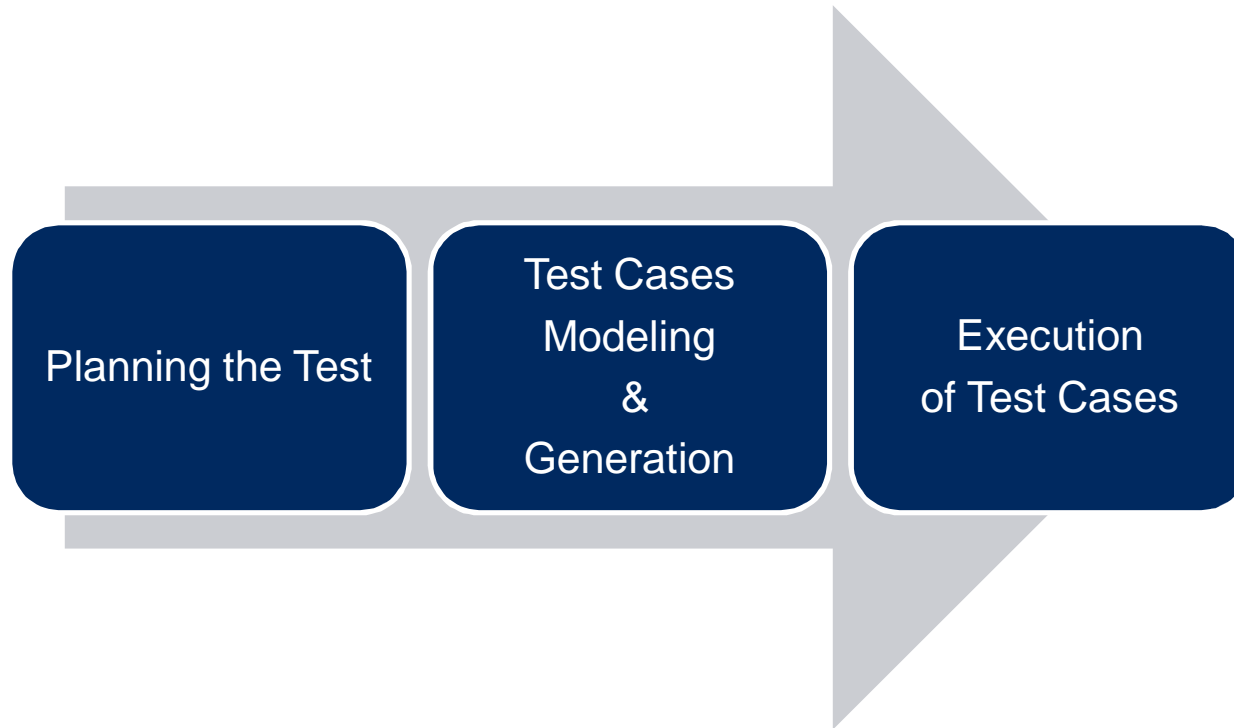
---

- IDNA protocol published on 2003
  - Updated on 2010
  - **Application** oriented solution!
  
- IDN ccTLD were introduced in 2010 (e.g. **السعودية**.)
  
- Assessment Goal
  - to **study** and **assess** end-user **experiences** regarding IDNA **implementations** for Arabic domain names.



# The Methodology

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# Methodology: Planning the Test

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- Considered **previous reports** (time-based order)
  - [IDN Top Level Domain Evaluations and Testing Report](#)
    - SaudiNIC & Arabic Domain Name Pilot Project Team, 13 December **2007**.
  - [Arabic IDN Test Results for Mozilla Firefox](#)
    - SaudiNIC, 06 Dec. **2010**
  - [Arabic IDN Test Results for Microsoft IE](#)
    - SaudiNIC, 12 Dec. **2010**
  - [Internationalized Domain Names State of play:](#)
    - EURid-UNESCO, May **2011**
  - [World report on Internationalized Domain Names deployment](#)
    - EURid-UNESCO, November **2012**
  - [World Report on IDN Deployment](#)
    - EURid-UNESCO, October **2013**



# Methodology: Planning the Test

- What can be **part** of IDNA report?

**Topics**

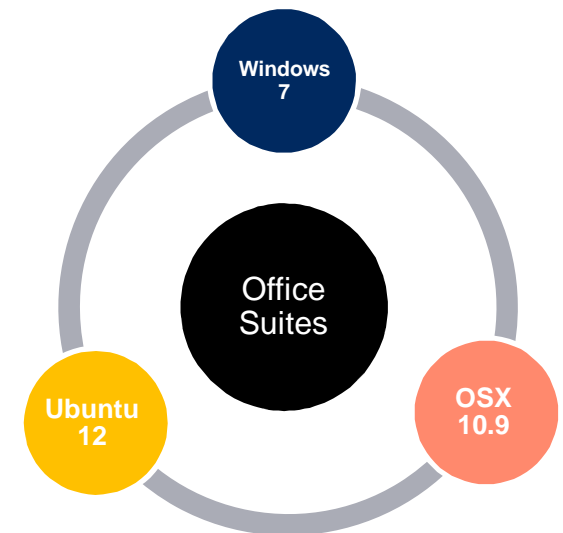
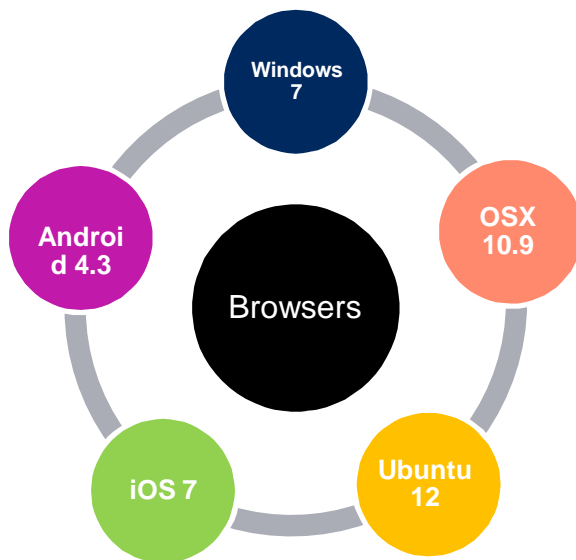
- Display
  - Document body (email/browsers)
    - View click: Domain
    - View click: domain with protocol
  - Address bar
    - Edit mode: Domain
    - View Mode: Domain
    - Domain Recognition: Domain
    - URI shorten: path
    - Suggestion (auto complete): Numbers left to right
  - Copy/paste: Copy/paste
  - SSL icon: SSL icon
  - Email Recipient: Email Recipient
  - Shell commands: Shell commands
- Domain Name
  - Arabic: Write the domain name directly in the address bar of the browser without protocol (e.g., http) and sub folder.
    - one level
    - two levels
    - three levels
    - with numbers
    - with hyphen
  - A-Label: Mix (arabic-ASCB, A&U labels)
    - with numbers
    - two levels
    - one level
    - with hyphen
  - Domain Protocol: Write the domain name directly in the address bar of the browser with a protocol and without sub folder.
    - Arabic domain
    - A-Label domain
    - Mix Mix (arabic-ASCB, A&U labels)
  - URL
    - ASCI: Write the domain name directly in the address bar of the browser with protocol and sub folder.
      - Directories: file, query
    - Arabic: Write the domain name directly in the address bar of the browser with protocol and Arabic sub folder.
      - Directories: file, query
    - Path
      - A-Label: Write the domain name directly in the address bar of the browser with protocol and sub folder like:
        - Directories: file, query
      - Mix: Write the domain name directly in the address bar of the browser with protocol and Arabic sub folder.
        - Directories: file, query
    - Email
      - domain: Send e-mail from your mail client to IDN TLD email.
        - arabic
        - A-Label
      - user
        - arabic
        - A-Label
        - ASCB
        - Mix
    - Service Interaction
      - The ability to create an account using an email address that uses an IDN as the FQDN
      - The ability to confirm an account creation, usually by done by email
      - The ability to successfully log in using an IDN once an account has been created using the IDN as the FQDN
      - Once logged into a web site, the ability to change preferences for the service
      - A subjective score (0: lowest, 10: highest) of how well the service supports IDNs and email addresses using IDNs
        - Domains: CMS
        - Register services: Domain Registration
    - Supportive
      - development Library
      - Regular Expression
      - SSL

Test Case ID	Test Case Description	Test Case Steps	Test Case Expected Results	Test Case Actual Results
<b>Browsers</b>				
1	Protocol and IDN	1. Open browser 2. Enter IDN in address bar	Browser recognizes IDN and renders page correctly	Pass
2	Protocol, IDN and folder	1. Open browser 2. Enter IDN and folder in address bar	Browser recognizes IDN and folder, renders page correctly	Pass
3	Protocol, IDN, folder, query	1. Open browser 2. Enter IDN, folder, and query in address bar	Browser recognizes IDN, folder, and query, renders page correctly	Pass
4	Protocol, IDN, folder, query, path	1. Open browser 2. Enter IDN, folder, query, and path in address bar	Browser recognizes IDN, folder, query, and path, renders page correctly	Pass
5	Protocol, IDN, folder, query, path, sub folder	1. Open browser 2. Enter IDN, folder, query, path, and sub folder in address bar	Browser recognizes IDN, folder, query, path, and sub folder, renders page correctly	Pass
6	Protocol, IDN, folder, query, path, sub folder, domain	1. Open browser 2. Enter IDN, folder, query, path, sub folder, and domain in address bar	Browser recognizes IDN, folder, query, path, sub folder, and domain, renders page correctly	Pass
7	Protocol, IDN, folder, query, path, sub folder, domain, protocol	1. Open browser 2. Enter IDN, folder, query, path, sub folder, domain, and protocol in address bar	Browser recognizes IDN, folder, query, path, sub folder, domain, and protocol, renders page correctly	Pass
8	Protocol, IDN, folder, query, path, sub folder, domain, protocol, path	1. Open browser 2. Enter IDN, folder, query, path, sub folder, domain, protocol, and path in address bar	Browser recognizes IDN, folder, query, path, sub folder, domain, protocol, and path, renders page correctly	Pass
9	Protocol, IDN, folder, query, path, sub folder, domain, protocol, path, sub folder	1. Open browser 2. Enter IDN, folder, query, path, sub folder, domain, protocol, path, and sub folder in address bar	Browser recognizes IDN, folder, query, path, sub folder, domain, protocol, path, and sub folder, renders page correctly	Pass
10	Protocol, IDN, folder, query, path, sub folder, domain, protocol, path, sub folder, domain	1. Open browser 2. Enter IDN, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain in address bar	Browser recognizes IDN, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain, renders page correctly	Pass
<b>Email Clients</b>				
1	Full IDN email	1. Open email client 2. Enter full IDN email in 'To' field	Email client recognizes full IDN email and sends message	Pass
2	Partial IDN email	1. Open email client 2. Enter partial IDN email in 'To' field	Email client recognizes partial IDN email and sends message	Pass
3	Full IDN email, folder	1. Open email client 2. Enter full IDN email and folder in 'To' field	Email client recognizes full IDN email and folder, sends message	Pass
4	Full IDN email, folder, query	1. Open email client 2. Enter full IDN email, folder, and query in 'To' field	Email client recognizes full IDN email, folder, and query, sends message	Pass
5	Full IDN email, folder, query, path	1. Open email client 2. Enter full IDN email, folder, query, and path in 'To' field	Email client recognizes full IDN email, folder, query, and path, sends message	Pass
6	Full IDN email, folder, query, path, sub folder	1. Open email client 2. Enter full IDN email, folder, query, path, and sub folder in 'To' field	Email client recognizes full IDN email, folder, query, path, and sub folder, sends message	Pass
7	Full IDN email, folder, query, path, sub folder, domain	1. Open email client 2. Enter full IDN email, folder, query, path, sub folder, and domain in 'To' field	Email client recognizes full IDN email, folder, query, path, sub folder, and domain, sends message	Pass
8	Full IDN email, folder, query, path, sub folder, domain, protocol	1. Open email client 2. Enter full IDN email, folder, query, path, sub folder, domain, and protocol in 'To' field	Email client recognizes full IDN email, folder, query, path, sub folder, domain, and protocol, sends message	Pass
9	Full IDN email, folder, query, path, sub folder, domain, protocol, path	1. Open email client 2. Enter full IDN email, folder, query, path, sub folder, domain, protocol, and path in 'To' field	Email client recognizes full IDN email, folder, query, path, sub folder, domain, protocol, and path, sends message	Pass
10	Full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder	1. Open email client 2. Enter full IDN email, folder, query, path, sub folder, domain, protocol, path, and sub folder in 'To' field	Email client recognizes full IDN email, folder, query, path, sub folder, domain, protocol, path, and sub folder, sends message	Pass
11	Full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder, domain	1. Open email client 2. Enter full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain in 'To' field	Email client recognizes full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain, sends message	Pass
<b>Office Apps</b>				
1	Full IDN email	1. Open office app 2. Enter full IDN email in 'To' field	Office app recognizes full IDN email and sends message	Pass
2	Partial IDN email	1. Open office app 2. Enter partial IDN email in 'To' field	Office app recognizes partial IDN email and sends message	Pass
3	Full IDN email, folder	1. Open office app 2. Enter full IDN email and folder in 'To' field	Office app recognizes full IDN email and folder, sends message	Pass
4	Full IDN email, folder, query	1. Open office app 2. Enter full IDN email, folder, and query in 'To' field	Office app recognizes full IDN email, folder, and query, sends message	Pass
5	Full IDN email, folder, query, path	1. Open office app 2. Enter full IDN email, folder, query, and path in 'To' field	Office app recognizes full IDN email, folder, query, and path, sends message	Pass
6	Full IDN email, folder, query, path, sub folder	1. Open office app 2. Enter full IDN email, folder, query, path, and sub folder in 'To' field	Office app recognizes full IDN email, folder, query, path, and sub folder, sends message	Pass
7	Full IDN email, folder, query, path, sub folder, domain	1. Open office app 2. Enter full IDN email, folder, query, path, sub folder, and domain in 'To' field	Office app recognizes full IDN email, folder, query, path, sub folder, and domain, sends message	Pass
8	Full IDN email, folder, query, path, sub folder, domain, protocol	1. Open office app 2. Enter full IDN email, folder, query, path, sub folder, domain, and protocol in 'To' field	Office app recognizes full IDN email, folder, query, path, sub folder, domain, and protocol, sends message	Pass
9	Full IDN email, folder, query, path, sub folder, domain, protocol, path	1. Open office app 2. Enter full IDN email, folder, query, path, sub folder, domain, protocol, and path in 'To' field	Office app recognizes full IDN email, folder, query, path, sub folder, domain, protocol, and path, sends message	Pass
10	Full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder	1. Open office app 2. Enter full IDN email, folder, query, path, sub folder, domain, protocol, path, and sub folder in 'To' field	Office app recognizes full IDN email, folder, query, path, sub folder, domain, protocol, path, and sub folder, sends message	Pass
11	Full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder, domain	1. Open office app 2. Enter full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain in 'To' field	Office app recognizes full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain, sends message	Pass
<b>Social Media</b>				
1	Full IDN email	1. Open social media app 2. Enter full IDN email in 'To' field	Social media app recognizes full IDN email and sends message	Pass
2	Partial IDN email	1. Open social media app 2. Enter partial IDN email in 'To' field	Social media app recognizes partial IDN email and sends message	Pass
3	Full IDN email, folder	1. Open social media app 2. Enter full IDN email and folder in 'To' field	Social media app recognizes full IDN email and folder, sends message	Pass
4	Full IDN email, folder, query	1. Open social media app 2. Enter full IDN email, folder, and query in 'To' field	Social media app recognizes full IDN email, folder, and query, sends message	Pass
5	Full IDN email, folder, query, path	1. Open social media app 2. Enter full IDN email, folder, query, and path in 'To' field	Social media app recognizes full IDN email, folder, query, and path, sends message	Pass
6	Full IDN email, folder, query, path, sub folder	1. Open social media app 2. Enter full IDN email, folder, query, path, and sub folder in 'To' field	Social media app recognizes full IDN email, folder, query, path, and sub folder, sends message	Pass
7	Full IDN email, folder, query, path, sub folder, domain	1. Open social media app 2. Enter full IDN email, folder, query, path, sub folder, and domain in 'To' field	Social media app recognizes full IDN email, folder, query, path, sub folder, and domain, sends message	Pass
8	Full IDN email, folder, query, path, sub folder, domain, protocol	1. Open social media app 2. Enter full IDN email, folder, query, path, sub folder, domain, and protocol in 'To' field	Social media app recognizes full IDN email, folder, query, path, sub folder, domain, and protocol, sends message	Pass
9	Full IDN email, folder, query, path, sub folder, domain, protocol, path	1. Open social media app 2. Enter full IDN email, folder, query, path, sub folder, domain, protocol, and path in 'To' field	Social media app recognizes full IDN email, folder, query, path, sub folder, domain, protocol, and path, sends message	Pass
10	Full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder	1. Open social media app 2. Enter full IDN email, folder, query, path, sub folder, domain, protocol, path, and sub folder in 'To' field	Social media app recognizes full IDN email, folder, query, path, sub folder, domain, protocol, path, and sub folder, sends message	Pass
11	Full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder, domain	1. Open social media app 2. Enter full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain in 'To' field	Social media app recognizes full IDN email, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain, sends message	Pass
<b>Search Engines</b>				
1	Protocol and IDN	1. Open search engine 2. Enter IDN in search bar	Search engine recognizes IDN and returns results	Pass
2	Protocol, IDN and folder	1. Open search engine 2. Enter IDN and folder in search bar	Search engine recognizes IDN and folder, returns results	Pass
3	Protocol, IDN, folder, query	1. Open search engine 2. Enter IDN, folder, and query in search bar	Search engine recognizes IDN, folder, and query, returns results	Pass
4	Protocol, IDN, folder, query, path	1. Open search engine 2. Enter IDN, folder, query, and path in search bar	Search engine recognizes IDN, folder, query, and path, returns results	Pass
5	Protocol, IDN, folder, query, path, sub folder	1. Open search engine 2. Enter IDN, folder, query, path, and sub folder in search bar	Search engine recognizes IDN, folder, query, path, and sub folder, returns results	Pass
6	Protocol, IDN, folder, query, path, sub folder, domain	1. Open search engine 2. Enter IDN, folder, query, path, sub folder, and domain in search bar	Search engine recognizes IDN, folder, query, path, sub folder, and domain, returns results	Pass
7	Protocol, IDN, folder, query, path, sub folder, domain, protocol	1. Open search engine 2. Enter IDN, folder, query, path, sub folder, domain, and protocol in search bar	Search engine recognizes IDN, folder, query, path, sub folder, domain, and protocol, returns results	Pass
8	Protocol, IDN, folder, query, path, sub folder, domain, protocol, path	1. Open search engine 2. Enter IDN, folder, query, path, sub folder, domain, protocol, and path in search bar	Search engine recognizes IDN, folder, query, path, sub folder, domain, protocol, and path, returns results	Pass
9	Protocol, IDN, folder, query, path, sub folder, domain, protocol, path, sub folder	1. Open search engine 2. Enter IDN, folder, query, path, sub folder, domain, protocol, path, and sub folder in search bar	Search engine recognizes IDN, folder, query, path, sub folder, domain, protocol, path, and sub folder, returns results	Pass
10	Protocol, IDN, folder, query, path, sub folder, domain, protocol, path, sub folder, domain	1. Open search engine 2. Enter IDN, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain in search bar	Search engine recognizes IDN, folder, query, path, sub folder, domain, protocol, path, sub folder, and domain, returns results	Pass



# Methodology: Planning the Test

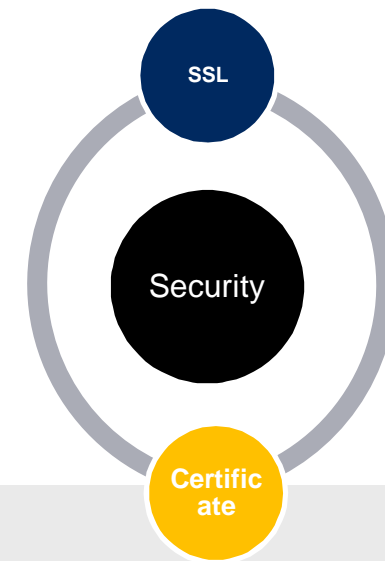
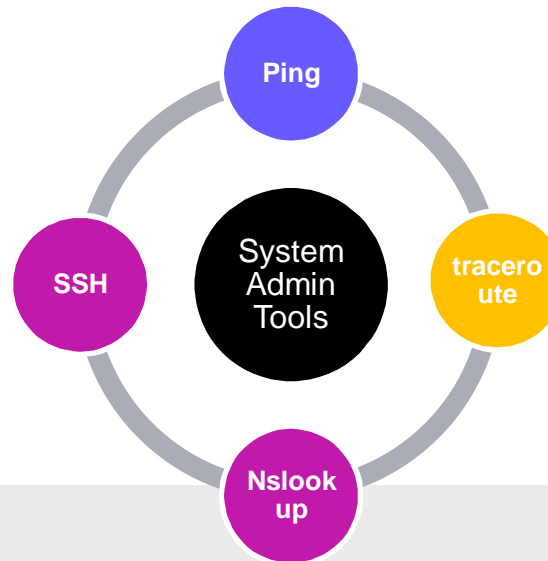
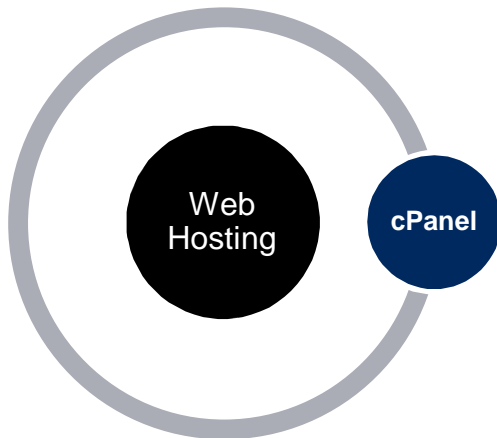
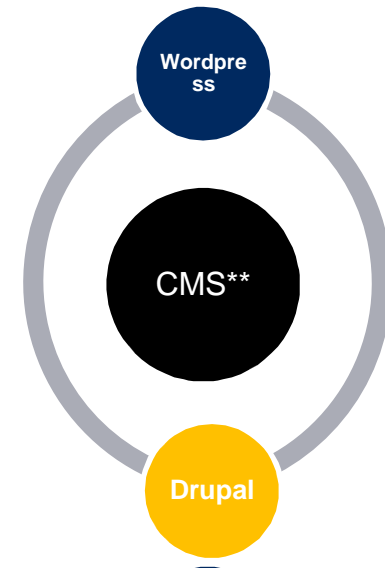
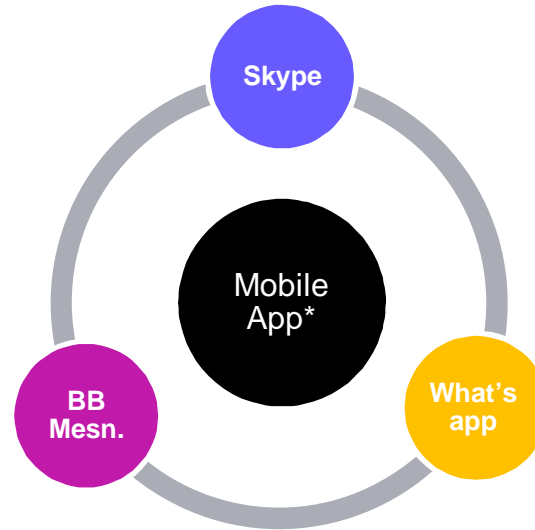
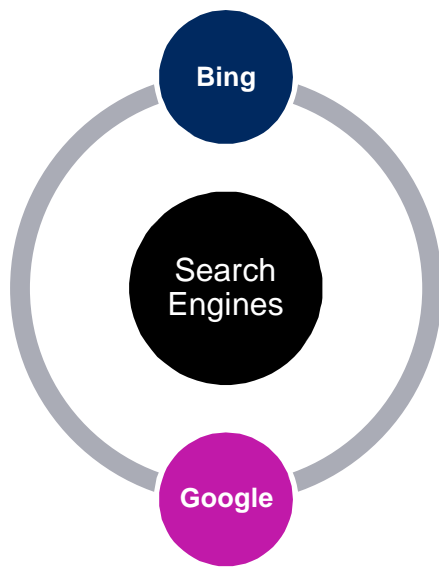
- What can be part of the report? .. **HUGE** +1000 things!
  - We have selected about ~2% to be assessed.
  - Our role in selection is: most **popular**, and **used** products.







# Methodology: Planning the Test



\* Cross platforms: iOS, Android, BlackBerry  
\*\* CMS: Content Management System



# Methodology: Test Case Modeling and Generation

- The test case model which is used to generate the test cases consists of **five components**:

## Behavior

- How a tester should behave.

## Input

- The IDN string being tested.

## Target

- What is the environment, product and which part of the product.

## Checks

- Yes/No questions being asked about what on concern.

## Results

- Acceptable, Not acceptable or Not applicable.



# Methodology: Test Case Modeling and Generation

- We Generate about **190** test cases.

The screenshot displays an Excel spreadsheet with a test case matrix. The spreadsheet is organized into several categories, each with a yellow header row. The categories and their corresponding test cases are as follows:

Category	Test Case ID	Test Case Description	Test Case Steps	Test Case Data	Test Case Expected Results
Browsers	1001	Address bar Test Cases	Protocol and IPN http://0.0.0.0 http://0.0.0.0	Protocol - IPN and folder http://0.0.0.0 http://0.0.0.0	URL Link *a href="http://0.0.0.0/Link.html#page=1" style="color: blue;">Link
	1002	View Mode	Create	http://0.0.0.0	
	1003	Full mode	Create	http://0.0.0.0	
	1004	Auto-complete	Auto recognition Copy & Paste	http://0.0.0.0	
	1005	Printing Alignment (R/L)	Auto recognition Copy & Paste	http://0.0.0.0	
Email Clients	2001	Outlook Test Cases	Full IMN email IMN email Partial IMN email ASCI(2)IMN ASCI(2)IMN (245) A-link 123 U-link ASCI(2)U-link (245) ASCI U-link 123 A-link	ASCI(2)IMN ASCI(2)U-link (245) ASCI U-link 123 A-link	Partial IMN *a href="mailto:someone@U-link.U-link.com" style="color: blue;">mailto:someone@U-link.U-link.com
	2002	Outlook Test Cases	Create	http://0.0.0.0	
	2003	Outlook Test Cases	Auto recognition Copy & Paste	http://0.0.0.0	
	2004	Outlook Test Cases	Auto recognition Copy & Paste	http://0.0.0.0	
	2005	Outlook Test Cases	Auto recognition Copy & Paste	http://0.0.0.0	
Office Apps	3001	Word Test Cases	URL Link *a href="http://0.0.0.0/Link.html#page=1" style="color: blue;">Link		
	3002	Word Test Cases	Create	http://0.0.0.0	
	3003	Word Test Cases	Auto recognition Copy & Paste	http://0.0.0.0	
	3004	Word Test Cases	Auto recognition Copy & Paste	http://0.0.0.0	
	3005	Word Test Cases	Auto recognition Copy & Paste	http://0.0.0.0	
Social Media	4001	Facebook Test Cases	Full IMN email IMN email Partial IMN email ASCI(2)IMN ASCI(2)U-link (245) A-link 123 U-link ASCI(2)U-link (245) ASCI U-link 123 A-link	ASCI(2)IMN ASCI(2)U-link (245) ASCI U-link 123 A-link	Partial IMN *a href="http://0.0.0.0/Link.html#page=1" style="color: blue;">Link
	4002	Facebook Test Cases	Create	http://0.0.0.0	
	4003	Facebook Test Cases	Auto recognition Copy & Paste	http://0.0.0.0	
	4004	Facebook Test Cases	Auto recognition Copy & Paste	http://0.0.0.0	
	4005	Facebook Test Cases	Auto recognition Copy & Paste	http://0.0.0.0	
Search Engines	5001	Search engines Test Cases	Protocol and IPN		
	5002	Search engines Test Cases	Protocol and IPN		



# Methodology: Test Case Modeling and Generation

- Developed a test case control web application

المركز السعودي لمعلومات الشبكة  
Saudi Network Information Center

**isa**

Test Cases  
Test Case Inputs  
Test Case Categories  
Test Case Comment  
User  
Change Password  
Logout

### IDN user experience assessment project

[Home](#) / [Test Cases](#)

Search

Search

Exact phrase  All words  Any word

test Case id	input id	target	category id	user id	status				
133	first.ثالث.رابع.Fifth-sixth.777.xn----- btddbpe8cpm6cb3moa.مثال.السعودية.	Google search: Firefox (as browser):4/2014: search field	Search Engines	alhamed	new				
134	first.ثالث.رابع.Fifth-sixth.777.xn----- btddbpe8cpm6cb3moa.مثال.السعودية.	Google search: Firefox (as browser):4/2014: search field	Search Engines	alhamed	new				
135	first.ثالث.رابع.Fifth-sixth.777.xn----- btddbpe8cpm6cb3moa.مثال.السعودية.	Google search: Firefox (as browser):4/2014: search field	Search Engines	alhamed	new				
136	first.ثالث.رابع.Fifth-sixth.777.xn----- btddbpe8cpm6cb3moa.مثال.السعودية.	Google search: Firefox (as browser):4/2014: advance search page: search field	Search Engines	alhamed	new				
137	first.ثالث.رابع.Fifth-sixth.777.xn----- btddbpe8cpm6cb3moa.مثال.السعودية.	Bing search: Firefox (as browser):4/2014: advance search page: search field	Search Engines	alhamed	new				
138	first.ثالث.رابع.Fifth-sixth.777.xn----- btddbpe8cpm6cb3moa.مثال.السعودية.	Bing search: Firefox (as browser):4/2014: search field	Search Engines	alhamed	new				
139	first.ثالث.رابع.Fifth-sixth.777.xn----- btddbpe8cpm6cb3moa.مثال.السعودية.	Bing search: Firefox (as browser):4/2014: search field	Search Engines	alhamed	new				
140	first.ثالث.رابع.Fifth-sixth.777.xn----- btddbpe8cpm6cb3moa.مثال.السعودية.	Bing search: Firefox (as browser):4/2014: search field	Search Engines	alhamed	new				
141	ثالث.أول.ثاني.xn--mgbcz8a.- خامس.سادس.xn----ymcbcq8b4b3fj.مثال.السعودية.	Bing search: Firefox (as browser):4/2014: advance search page: search field	Search Engines	alhamed	new				
	ثالث.أول.ثاني.xn--mgbcz8a.-	Bing search: Firefox (as	Search						



# Methodology: Execution of Test Cases

- Run the test cases and **collected results**.
  - Answer the **check questions**.
  - Upload **screenshots** of failed checks.

The screenshot displays the 'TSA user experience assessment project' interface. It shows a list of test cases with columns for 'test case id', 'id', and 'behaviour'. The selected test case is 'input id', with a target of 'Outlook: Outlook 10.0 (maverick) version 2010: message field (viewing mode)'. The interface includes various metadata fields like 'category id', 'user id', 'status', and 'readable info'. A 'Screenshot' section at the bottom allows for uploading images, with a 'Screenshot' button and a 'Save' button at the bottom left.



# Results

Target	Acceptable	Not-acceptable
Browsers	60%	40%
Email clients	6%	94%
Office Suites	2%	98%
System Admin Tools	3%	97%
Search Engines	14%	86%
Mobile Apps	13%	87%
CMS	0%	100%
Security	0%	100%
Web Hosting	0%	100%

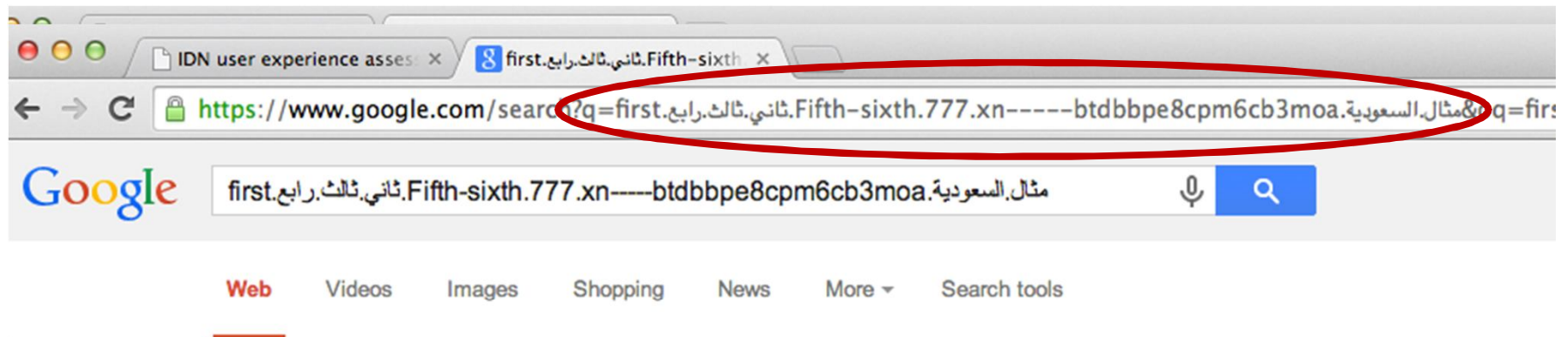


# Results

Browser	OS	Acceptable	Not-acceptable
Internet Explorer	Windows7	73%	27%
Safari	Windows7	62%	38%
Safari	OSX 10.9	60%	40%
Safari	iOS 7	65%	35%
Chrome	Windows7	40%	60%
Chrome	OSX 10.9	41%	59%
Chrome	Android 3.4	63%	37%
Chrome	Ubuntu12	<b>21%</b>	79%
Firefox	Windows7	<b>93%</b>	7%
Firefox	OSX 10.9	68%	32%
Firefox	Ubuntu12	64%	36%



# Examples: Browser



Your search - **first.ثالث.ثاني.Fifth-sixth.777.xn-----btddbpe8cpm6cb3moa.مثال.السعودية** - did not match any documents.

Suggestions:

- Make sure all words are spelled correctly.
- Try different keywords.
- Try more general keywords.





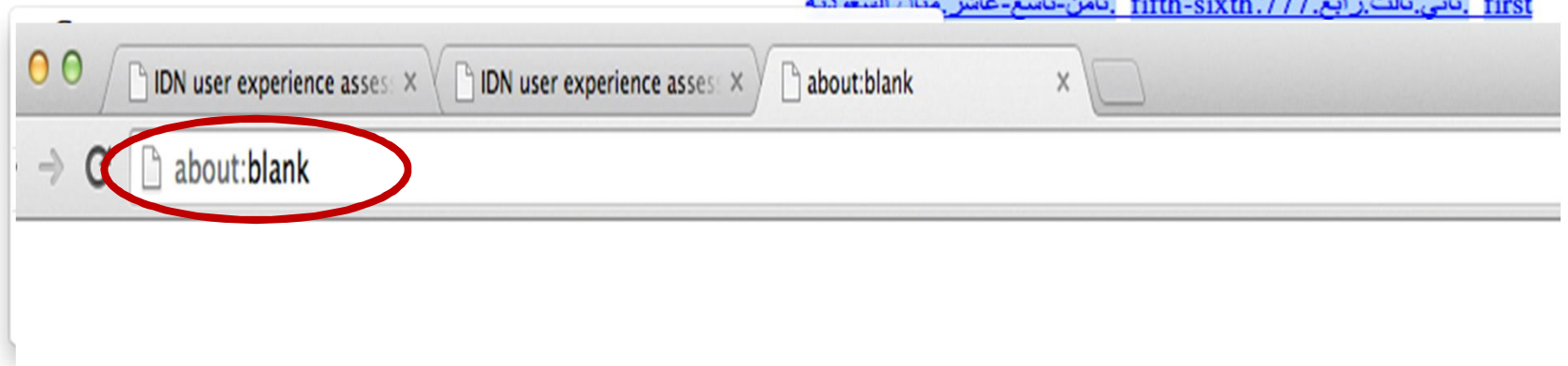
# Examples: Browser

الرابط الأول:

أول. ثاني. ثالث. رابع. خامس. سادس. سابع. ثامن. مثال. السعودية

الرابط الثاني:

first. ثاني. ثالث. رابع. fifth-sixth.777. ثامن. تاسع. عاشر. مثال. السعودية





# Examples: Browser

The screenshot shows a browser window with a warning message. The address bar contains the URL: `https://أول.ثاني.ثالث.رابع.خامس-سادس.سابع-ثامن.مثال.السعودية/`. The warning message is circled in red and reads:

```
xn--igb0el.xn--mgbh6fqa.xn--  
mgbhb3h.xn--mgbcz8a.xn----  
ymcbzivbc0n.xn----  
ymbcq8b4b3fj.xn--mgbh0fb.xn--  
mgbp4a5d4ar  
Identity not verified
```

Below the warning, there are tabs for "Permissions" and "Connection". The "Connection" tab is active, showing the following information:

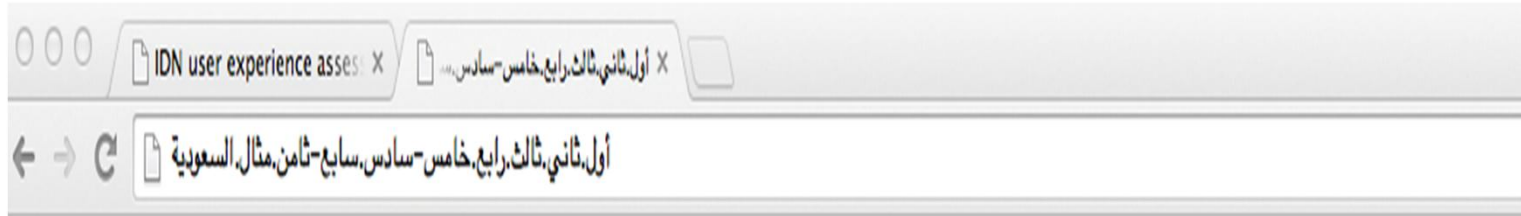
- Warning:** The identity of this website has not been verified.
  - Server's certificate does not match the URL.
- [Certificate Information](#)
- Secure:** Your connection to xn--igb0el.xn--mgbh6fqa.xn--mgbhb3h.xn--mgbcz8a.xn----ymcbzivbc0n.xn----ymbcq8b4b3fj.xn--mgbh0fb.xn--mgbp4a5d4ar is encrypted with 128-bit encryption.
- The connection uses TLS 1.2.
- The connection is encrypted and authenticated using AES\_128\_GCM and uses DHE\_RSA as the key exchange mechanism.
- Site information:** You have never visited this site before today.
- [What do these mean?](#)

طاقات العربية

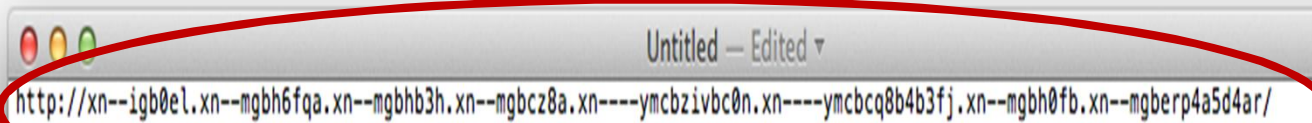
SSL certificate info.



# Examples: Browser



صفحة الاختبار للنطاقات العربية

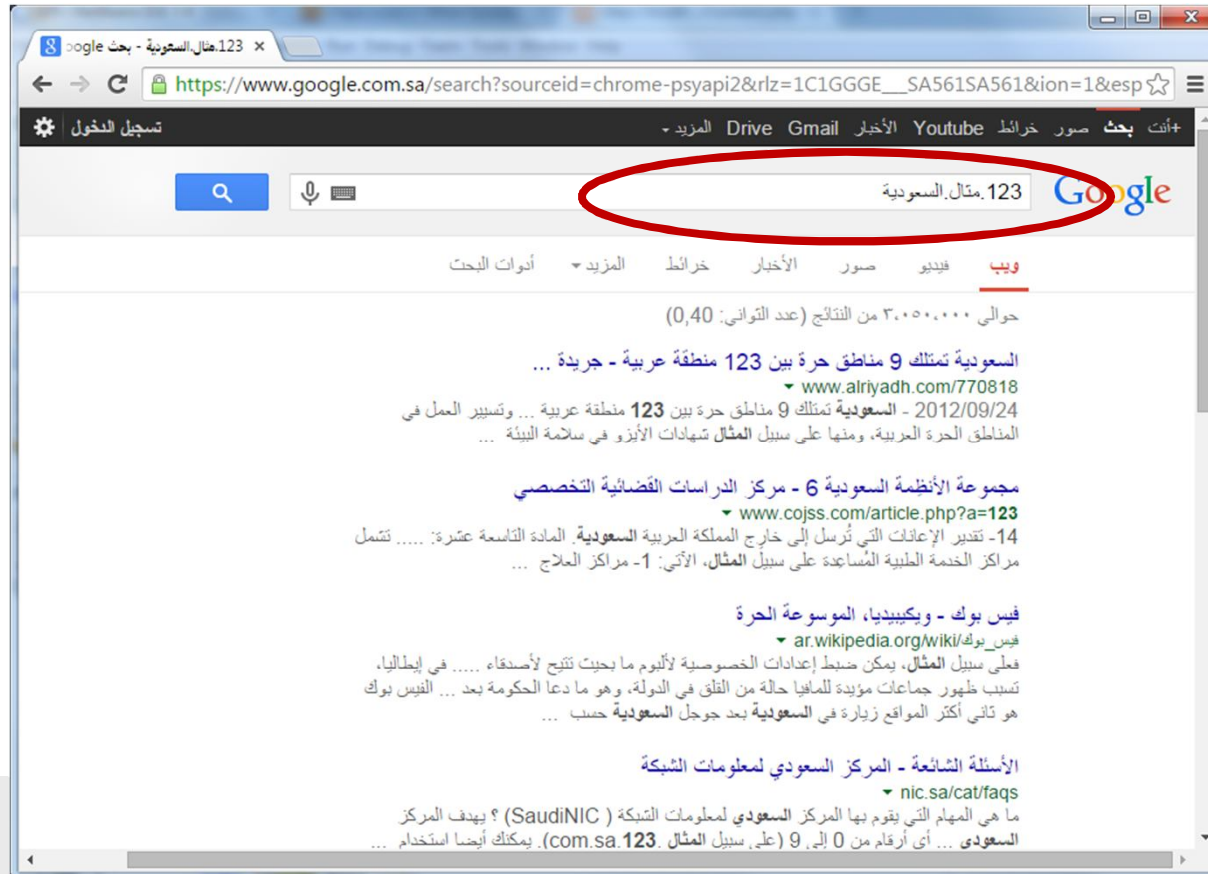


**After copy and past the domain!**



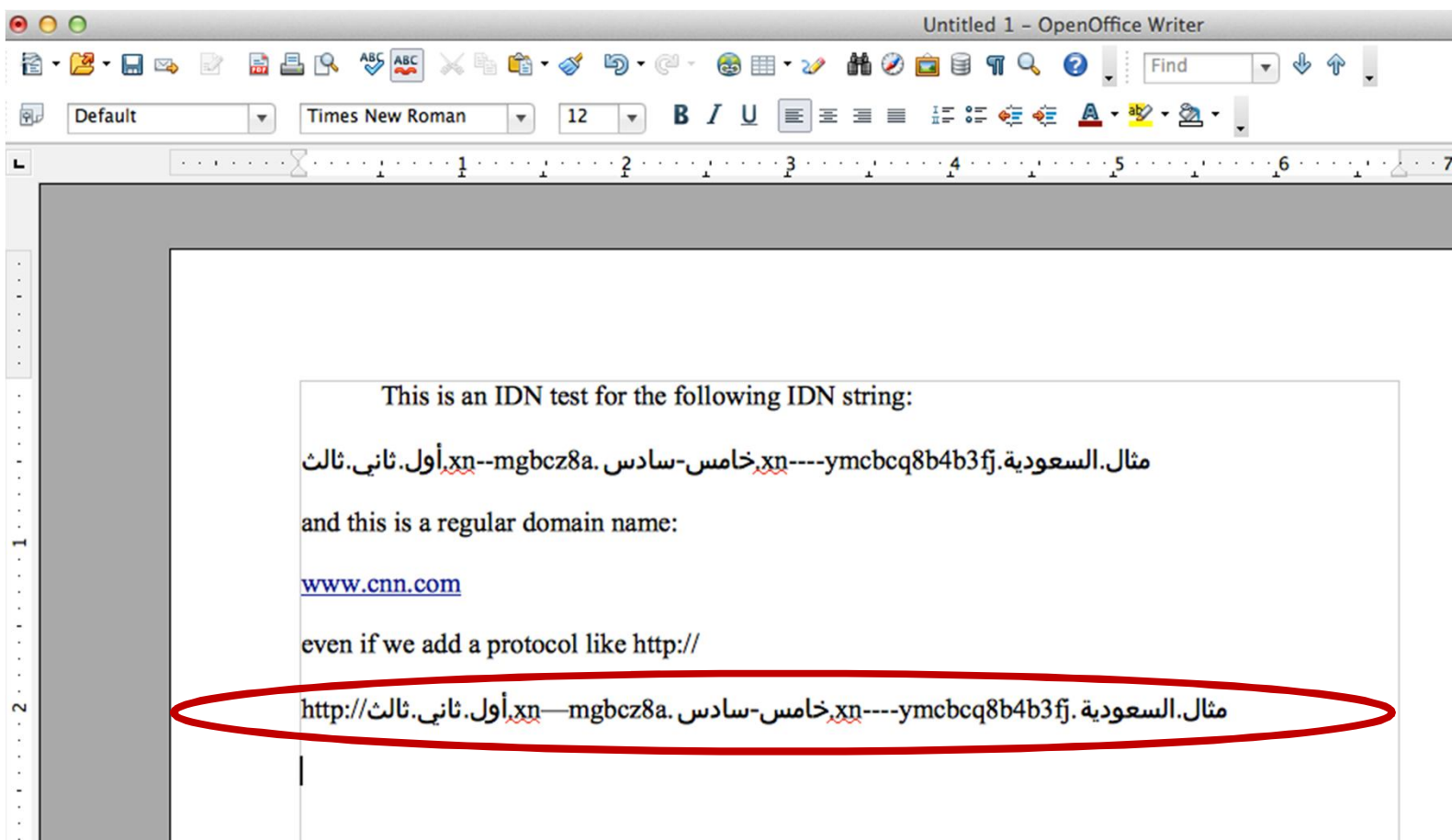
# Examples: Browser

- All Browsers didn't support IDNA 2010 !
  - is was been out there for more than 4 years





# Examples: Office Tools





# Examples: Search Engine

numbers ranging from:  to  10.35 kq

Then narrow your results by...

language: any language

region: any region

last update: anytime

site or domain: مثال.السعودية

terms appearing: anywhere in

SafeSearch: Show most r

reading level: no reading le

file type: any format

usage rights: not filtered b

Google Search Images Mail Drive Calendar Sites Groups More

site:%D8%A7%D9%84%D8%B3%D8%B9%D9%88%D8%AF%D9%8A%I

Web Images News More Search tools

About 69,500 results (0,56 seconds)

Try Google Webmaster Tools

[www.google.com/webmasters/](http://www.google.com/webmasters/)

Do you own [السعودية](#)? Get indexing and ranking data from Google.

STC: الاتصالات السعودية

الاتصالات السعودية Translate this page

شركة الاتصالات السعودية STC توفر خدمات الهاتف الجوال والتابث والانترنت والتلفزيون التاطلي انجن على مستوى الأفراد وكذلك تقدم خدمات للأعمال الصغيرة ...

برنامج التعاملات الإلكترونية الحكومية - يسر

يسر.السعودية Translate this page

يحدد برنامج التعاملات الإلكترونية الحكومية (يسر) اهتمام المملكة العربية السعودية لتطبيق مفهوم التعاملات الإلكترونية الحكومية. ويتبني هذا البرنامج ضمن المبادرات ...

مدونة حكائتي والزمن

You can also



# Examples: System Admin Tools (SSH)

```
User-2:~ Alhamed$  
User-2:~ Alhamed$  
User-2:~ Alhamed$ ssh alhamed@مثال.السعودية.xn--ymcbcq8b4b3fj.خاص-س.ص. xn--mgbcz8a.أول.ثاني.ثالث  
The authenticity of host ' (::1)' can't be established.  
RSA key fingerprint is 76:c7:22:73:30:ed:90:c6:5c:a4:71:91:e1:03:08:29.  
Are you sure you want to continue connecting (yes/no)? yes  
Warning: Permanently added ' (RSA) to the list of known hosts.  
Password:  
bash: مثال.السعودية.xn--ymcbcq8b4b3fj.خاص-س.ص. xn--mgbcz8a.أول.ثاني.ثالث: command not found  
User-2:~ Alhamed$
```



# What's Next?

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- Need to expand the user experience scope to cover other areas:
  - Registrars & Registries
    - Display IDN domains correctly (Especially RTL)
    - Standardized terminology (U-Lable, A-Lable, Blocked variant ..etc)
    - Consistent way to enable/disable variants
    - Unified variant protection (language tables & variants)
  - ...etc





# What's Next?

## Domain Registration

Apply Now

--Select Popular N

Domain Registration موقع.

To order your .موقع domain name, enter your domain into the box below, click the "Order" button and then follow the on screen prompts

WWW.

If you require assist  
More Domains Avail

Domain موقع.  
We're pleased to announce  
The recent launch of new  
bound to country level or  
specifically about who the  
Domains such as .موقع.c  
allowing you to get your

Please Login or Register

### Shopping Cart

[Web Hosting](#) | [Register Domain](#) | [Transfer Domain](#) | [View Cart](#)

Choose Currency: AED

Type in the domain you wish to register below to check for availability.

WWW. راندابراهيم امارات

### CHOOSE DOMAINS

Domain Name	Status	More Info
راندابراهيم امارات	<input checked="" type="checkbox"/> Available! Order Now	1 Year/s @ AED145.00

### Quick Navigation

- [Portal Home](#)
- [Client Area](#)
- [Knowledgebase](#)
- [Submit Ticket](#)
- [Order](#)

### Client Login

Email

Password

Remember Me

### Search

Knowledgebase



# Conclusion

---

- IDNA support  $\neq$  browsers' address bars support.
- User acceptance for IDNA is less than 1% (Excluding address bar in some web browsers)
  - It's been more than 10 years since the publication of IDNA RFCs, and still less than 1%!
- How long do we need for Internationalized Email (IDN Email) to be fully deployed!
  - Do we need to wait 10+ years to get a 1% acceptance!
- RFCs are not enough, we need accelerators.
- For more info. about the report:
  - <http://nic.sa/docs/ADN/IDN-Report-2014-FINAL3.pdf>



***Thank you***

**شكرًا**

للمزيد من المعلومات يمكنكم زيارة:

**For more information you can visit:**

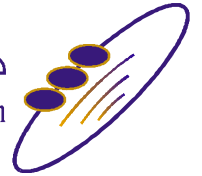


المركز السعودي لمعلومات الشبكة  
Saudi Network Information Center

سجل السعودية

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Communications and Information Technology Commission



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