

User Experience In IDNA

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Presented by ...

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Outline

- Context
- Methodology
- Results
- Examples



Context (Arabic IDN)

- This assessment is being performed on IDNA **from an Arabic user point of view**. Therefore, any referencing to IDNA during this presentation, it's for Arabic IDNA.
- The main purpose is to assess end user experience. In other word, we look to IDNA from user point of view.



The Methodology

Brain
Storming

What it can be part of IDNA report.

Literature
Review

Look at previous efforts and reports.

Scope
Definition

What we can exam in a given period of time.

Test Case
Modeling

Build a test case model.

Test Case
Creation

Generate test cases based on the model

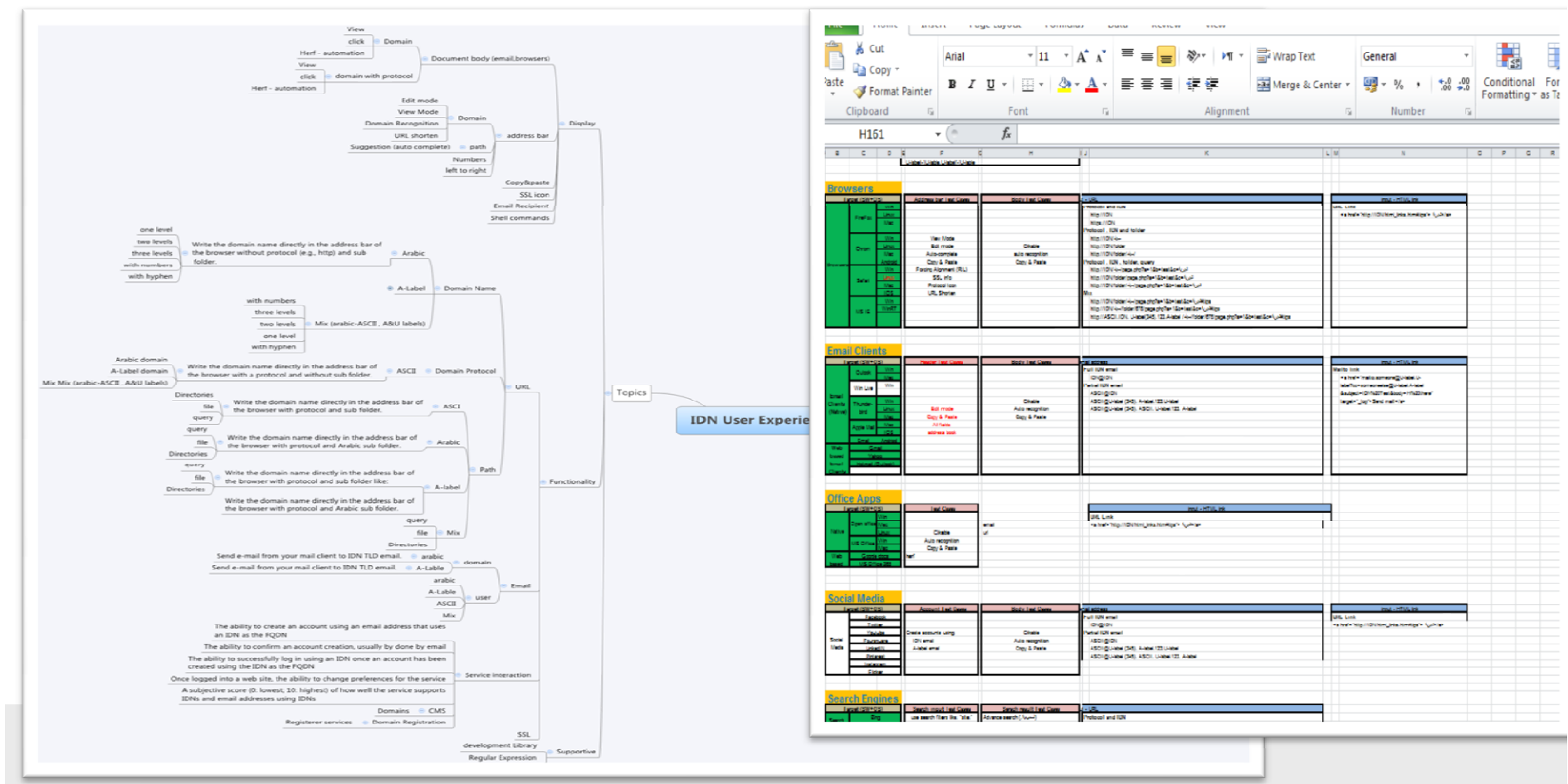
Tools
Creation

Develop a system to manipulates test cases.

Execution

Apply the test cases and collect results.

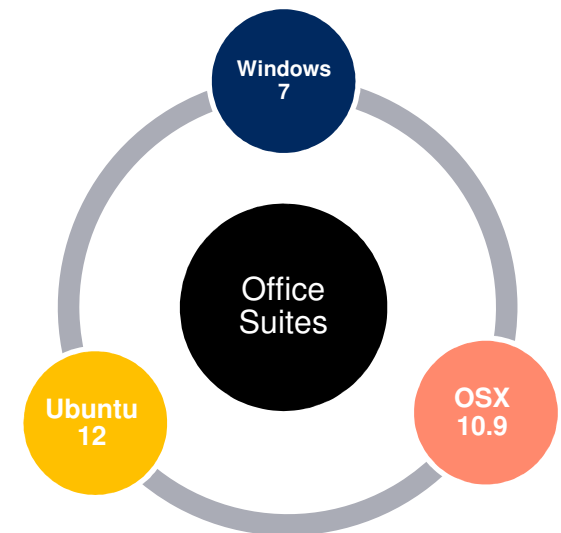
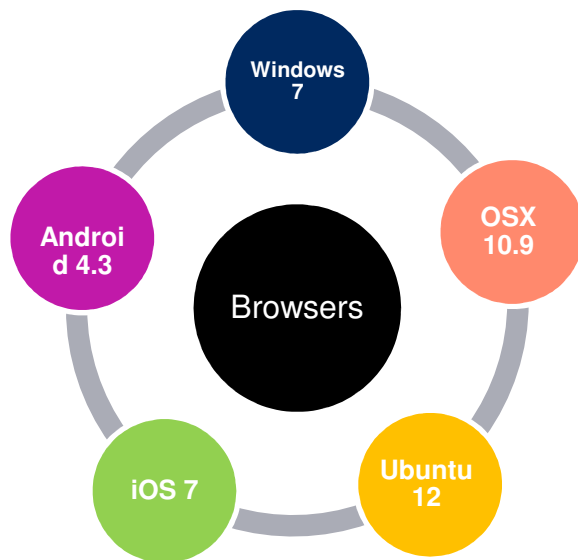
- Thinking about what it can be part of IDNA report.





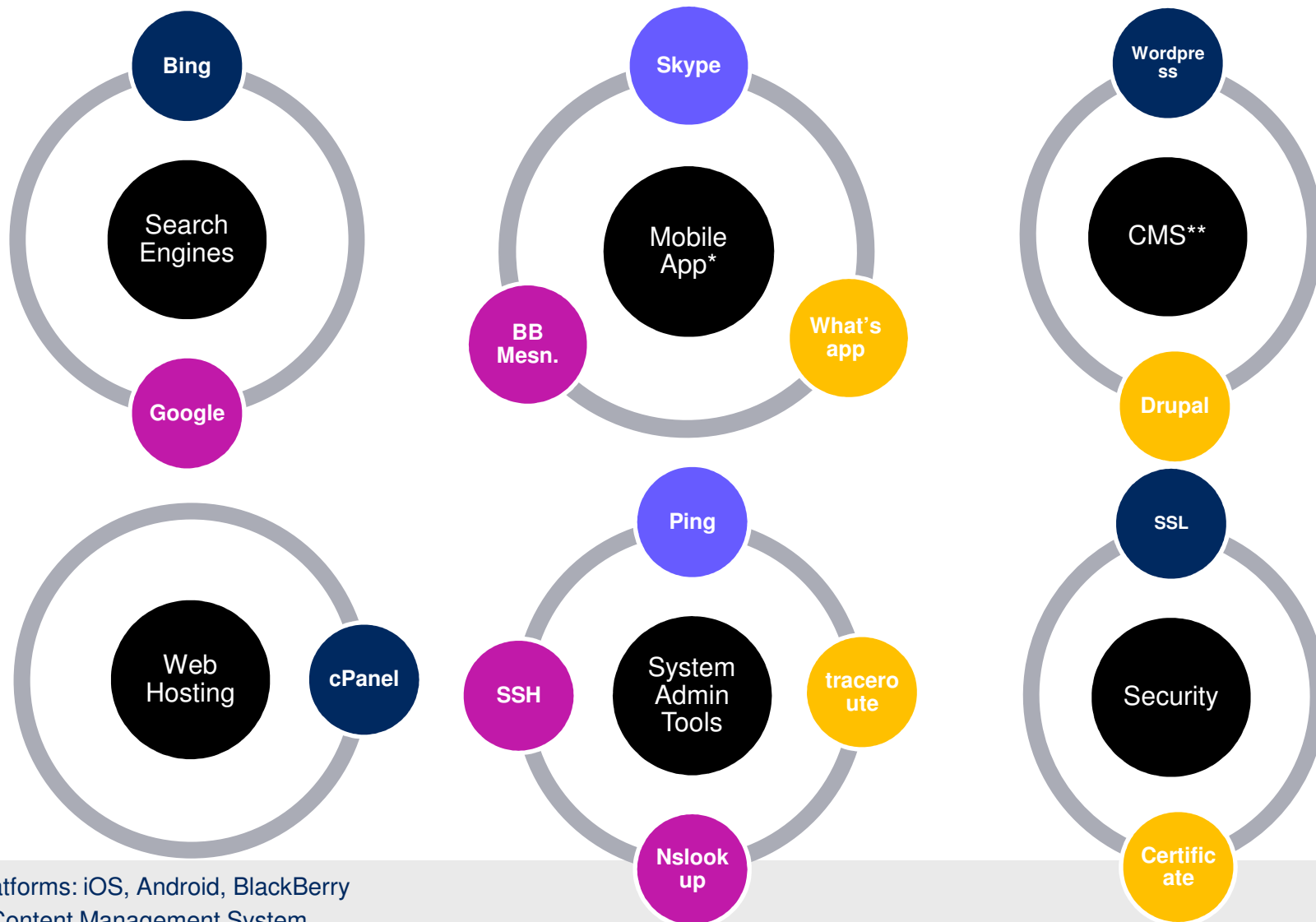
Methodology: Scope definition

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





Methodology: Scope definition



* Cross platforms: iOS, Android, BlackBerry

** CMS is Content Management System



Methodology: Test Case Model

- The test case model used to generate the test cases. It consist 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.

- We Generate about ~ 190 test case so far.

[illegible]



Methodology: Control system

- 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.ثاني.ثالث.رابع.Fifth-sixth.777.xn-----btddbpe8cpm6cb3moa.مثال.السعودية.	Google search: Firefox (as browser):4/2014: search field	Search Engines	alhamed	new				
134	first.ثاني.ثالث.رابع.Fifth-sixth.777.xn-----btddbpe8cpm6cb3moa.مثال.السعودية.	Google search: Firefox (as browser):4/2014: search field	Search Engines	alhamed	new				
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138	first.ثاني.ثالث.رابع.Fifth-sixth.777.xn-----btddbpe8cpm6cb3moa.مثال.السعودية.	Bing search: Firefox (as browser):4/2014: search field	Search Engines	alhamed	new				
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141	خامس.-xn--mgbcz8a.أول.ثاني.ثالث.سادس.xn-----ymcbcq8b4b3fj.مثال.السعودية.	Bing search: Firefox (as browser):4/2014: advance search page: search field	Search Engines	alhamed	new				
	خامس.-xn--mgbcz8a.أول.ثاني.ثالث.	Bing search: Firefox (as	Search						

- Perform the test cases and collect results.
 - Answer the check questions.
 - Upload screenshots of failed checks.

[illegible]



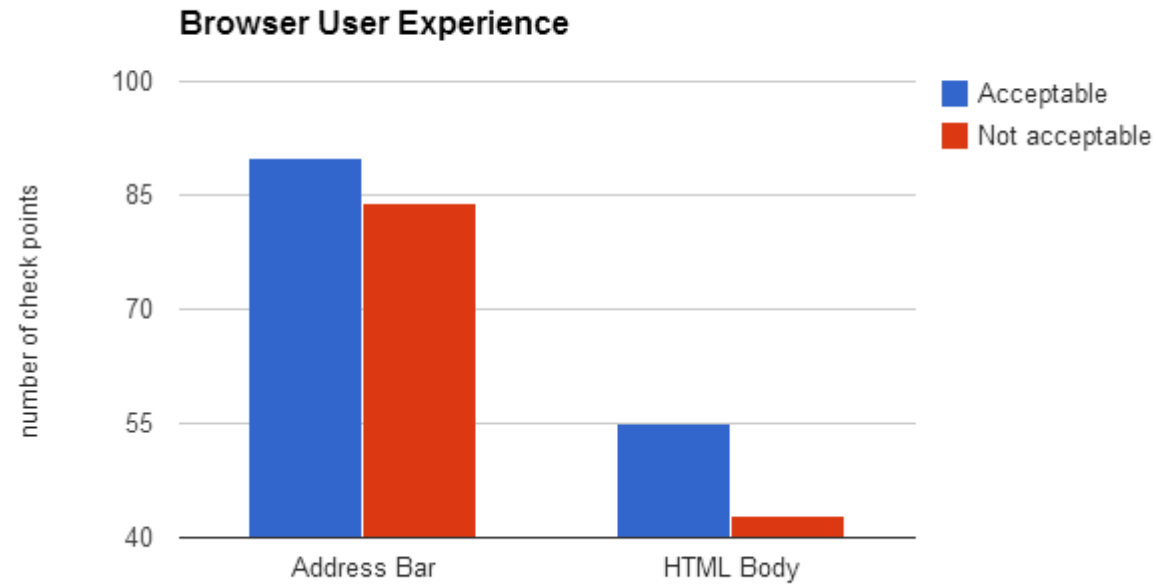
Results

- The assessment project is not finished yet. So far, we accomplished %85 of it.
- The result built on %85 of the total assessment test cases.
- The completed report can be found on our website:
<http://nic.sa/en/cat/documentlibrary>



Results: Browsers result summary

■ Browsers

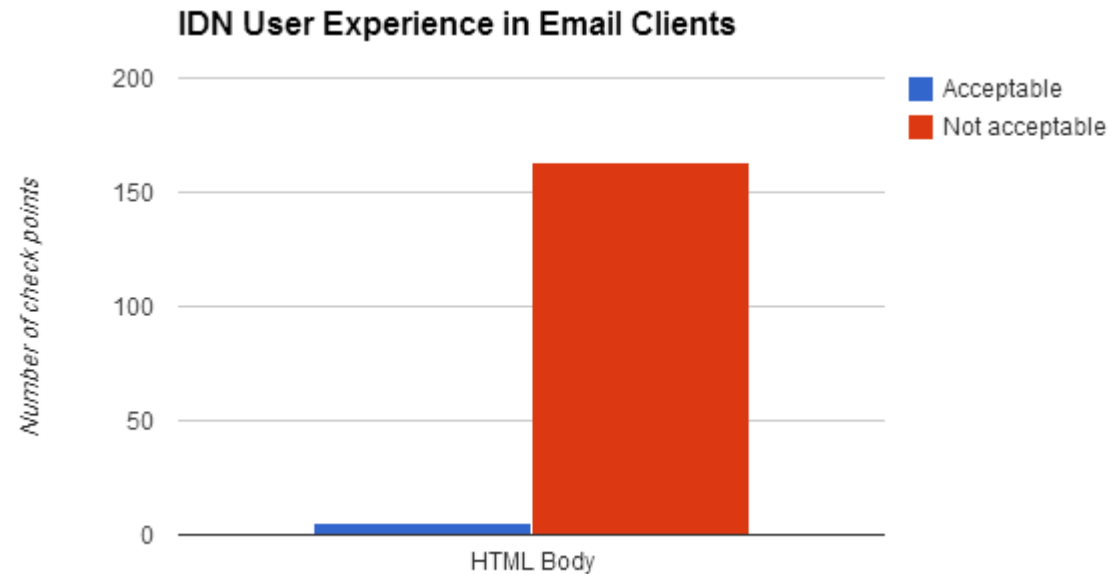




Results: Email clients result summary

■ Email Clients

- This is not IDN Email testing. It is IDN in email messages.

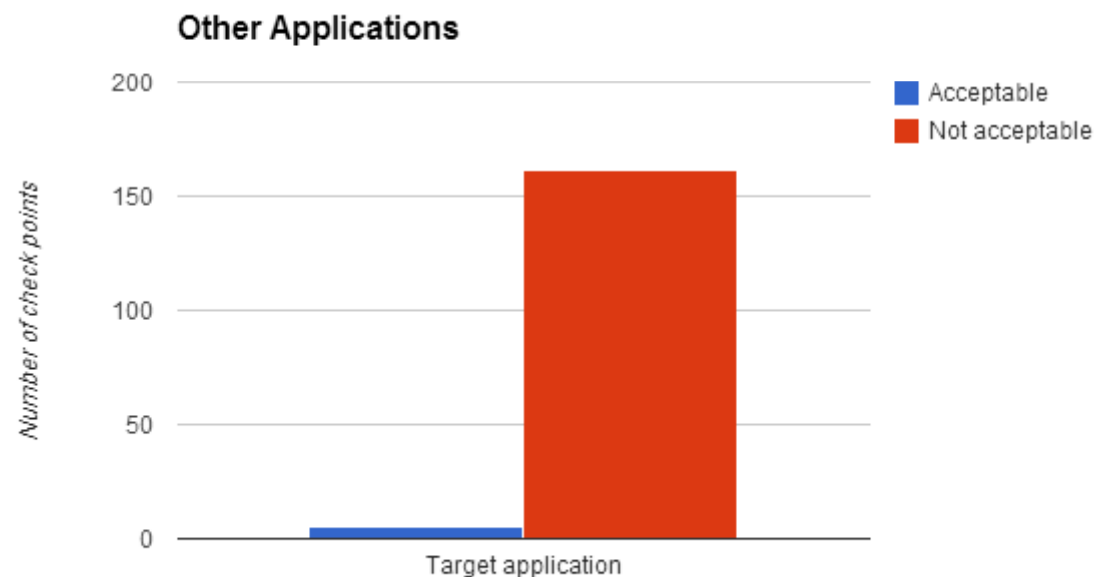




Results: Other applications/tools result summary

■ Other applications/tools

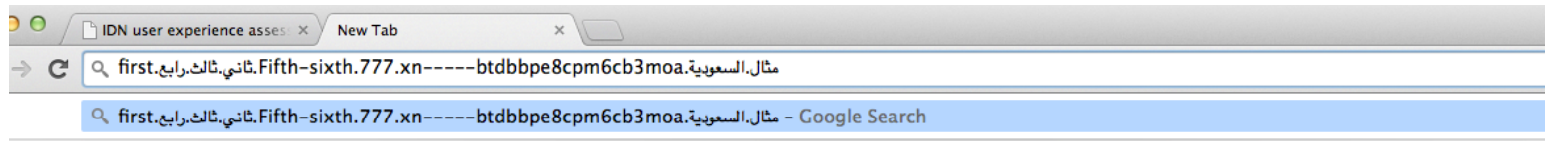
- Office suites, system admin tools, Search Engines, Mobile Apps, Content Management System (CMS), Web Hosting management tool, Security.





Examples

- Chrome refuse to deal with IDN:

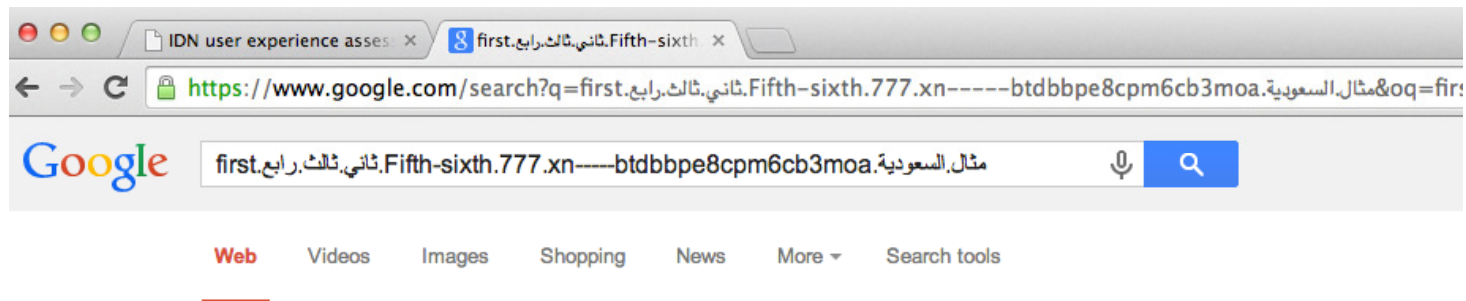


Google



Examples

- Chrome refuse to deal with IDN:



Your search - **first.ثاني.ثالث.رابع.Fifth-sixth.777.xn-----btdbbpe8cpm6cb3moa.مثال.السعودية** - did not match any documents.

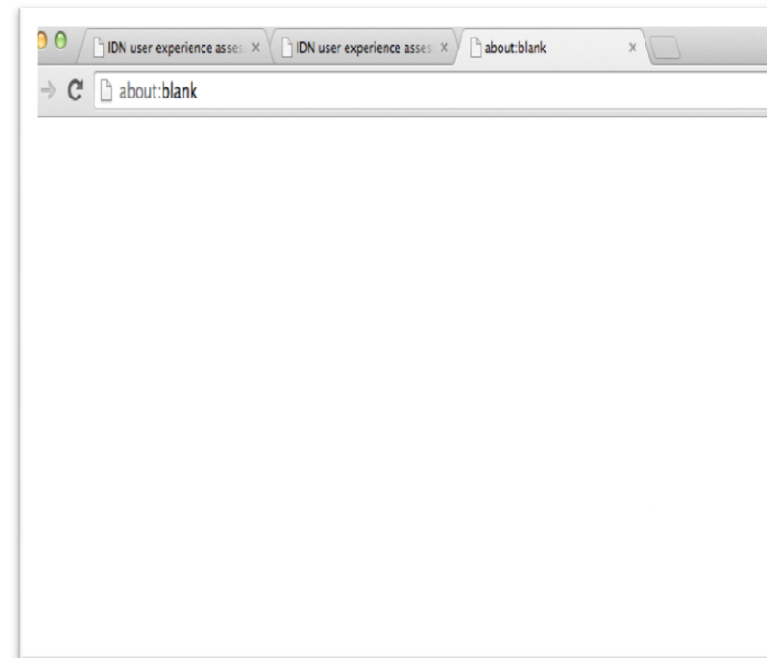
Suggestions:

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



Examples

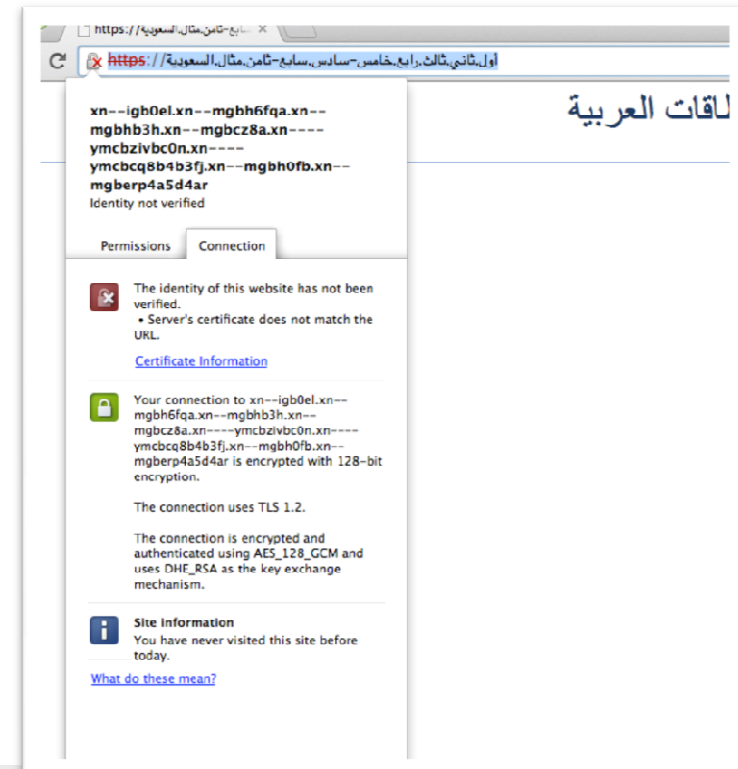
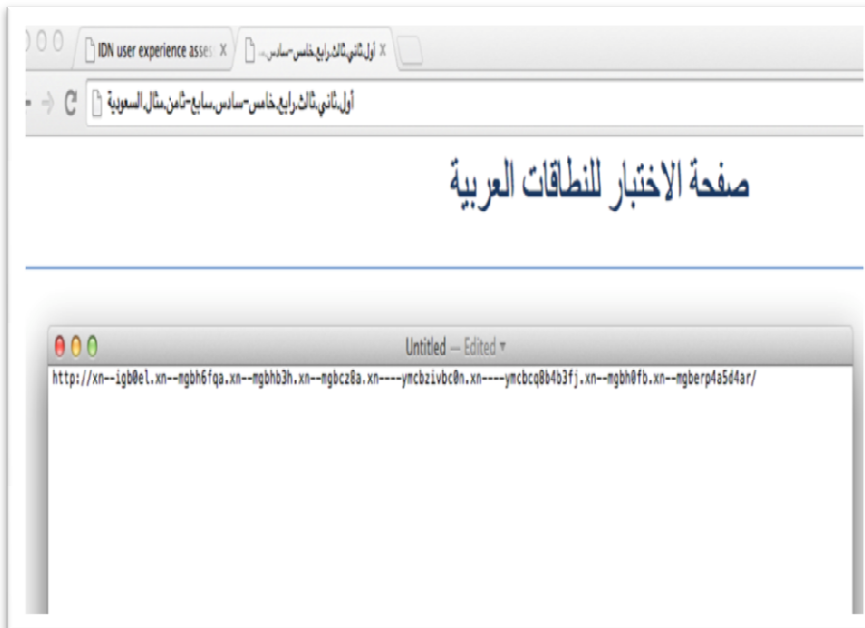
- Chrome refuse to deal with IDN:

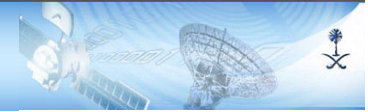




Examples

- Chrome refuse to deal with IDN:



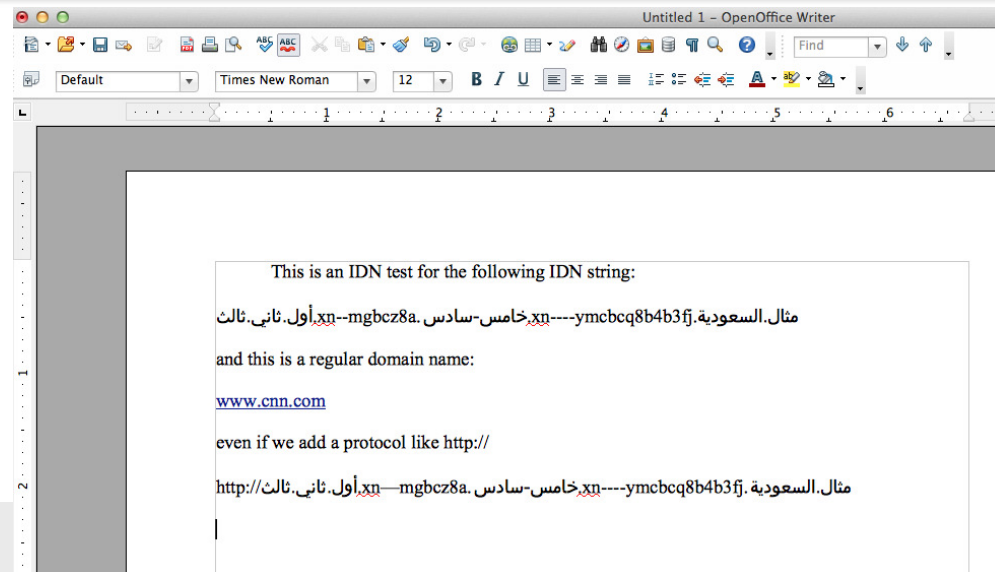


Examples

■ Microsoft Word



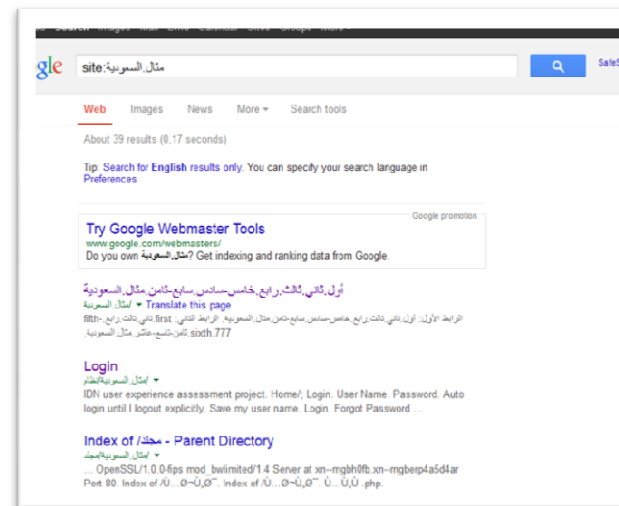
■ Open Office



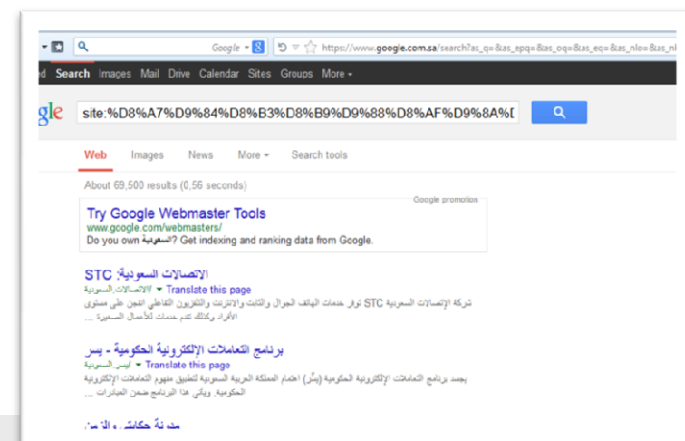
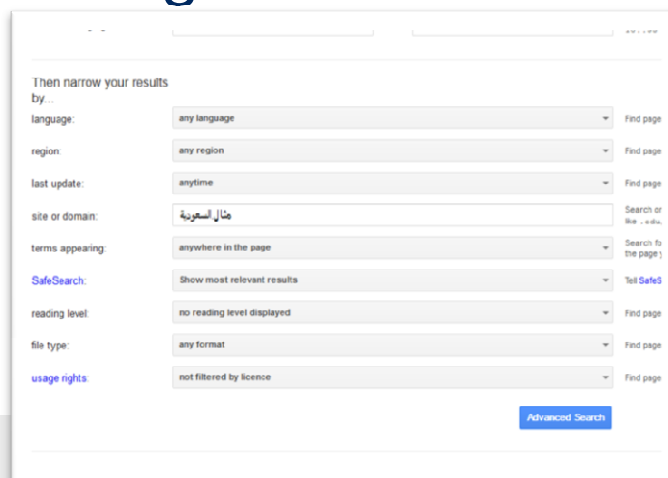


Examples

■ Google search



■ Google advance search





Examples

- System Admin Tools: SSH

```
Alhamed — bash — 107x23
User-2:~ Alhamed$
User-2:~ Alhamed$
User-2:~ Alhamed$ ssh alhamed@xn--mgbcz8a.xn--yabcq8b4b3fj
The authenticity of host 'xn--yabcq8b4b3fj' 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 'xn--yabcq8b4b3fj' (RSA) to the list of known hosts.
Password:
bash: xn--yabcq8b4b3fj: command not found
User-2:~ Alhamed$
```



Conclusion

- 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, it's less than 1%!
- IDNA \neq browsers address bars.
- How long do we need for Internationalized Email (IDN Email) to be fully deployed, are we going to wait 10+ years to get a 1% acceptance of IDN Email.
- RFCs are not enough, we need accelerators. As it is happening in other internet converting topics (e.g. IPv6)