



#ICANN50



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Universal Acceptance

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Agenda

- Introduction
- Recent Activity
- The Plan
- Call to Action

Universal Acceptance

A Changing World of Identifiers

At the Dawn of the TLD Space

- “com/net/org” and the ISO 3166 two-letter codes
 - All but one [arpa.] three letters or shorter
 - All in “plain” ASCII
 - No changes to DNS root beyond new ISO 3166 codes
- Email addresses (mailbox names) were ASCII
- Assumptions were made, “burned in”
 - User interfaces would list valid TLDs
 - Security rules were built according to the list

Initial TLD Expansions

- Expansion approved in 2000 and again 2003
 - Set of gTLDs in 2000
 - Set of sTLDs in 2003
 - First non-ccTLD changes since 1988
 - Some names were longer (4 letters and more)
- Broke assumptions about valid TLDs, name length

IDN ccTLDs Arrive

- Expansion into IDN ccTLDs
 - First encoding of operating non-ASCII TLDs
 - IDN test TLDs were not operational (little impact)
 - Names were much longer (more letters) than earlier sets
 - Right-to-left scripts challenged user interfaces
- Broke assumptions regarding ASCII in TLD names

2012 gTLD Program

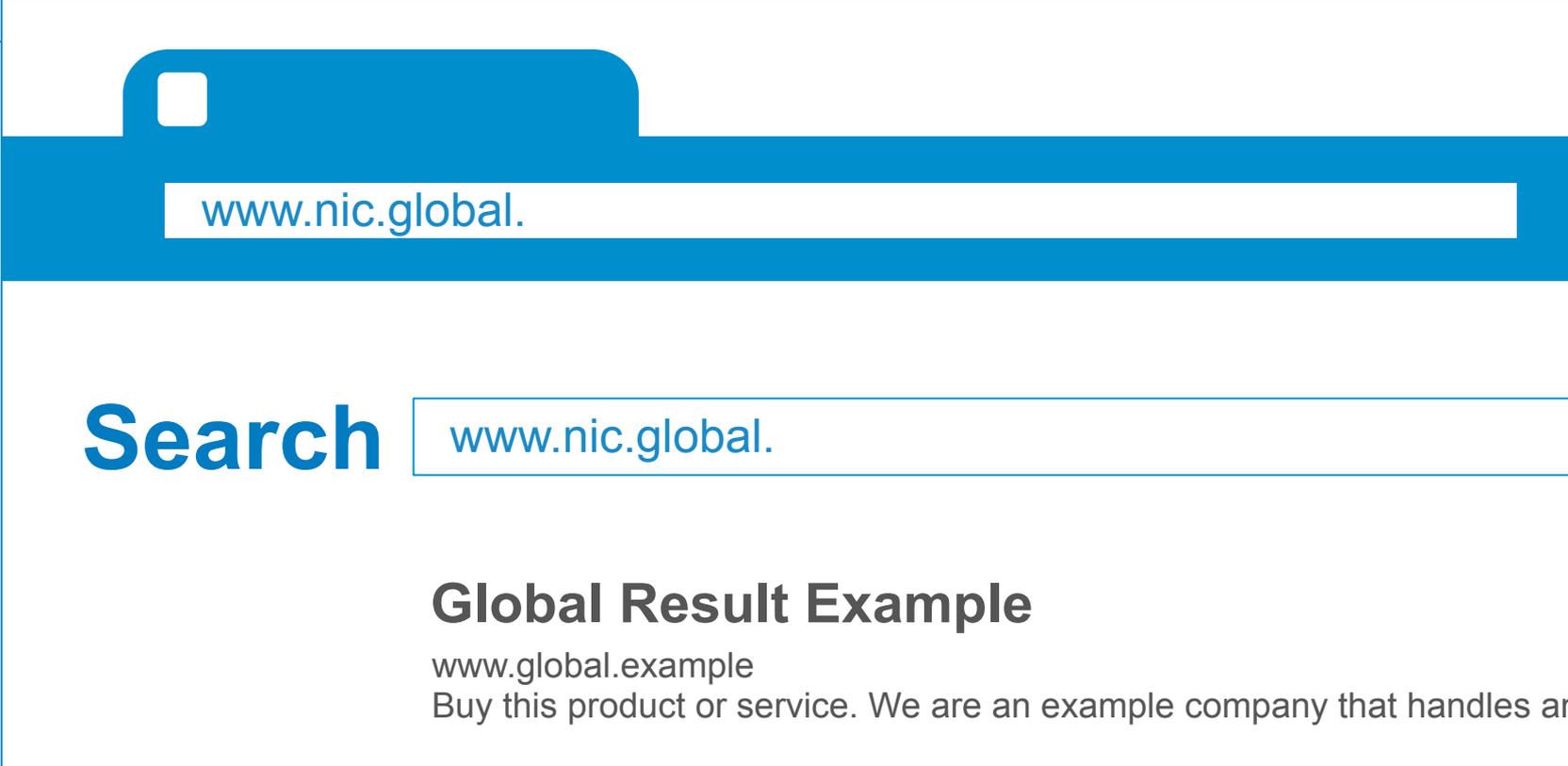
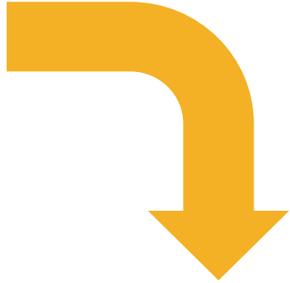
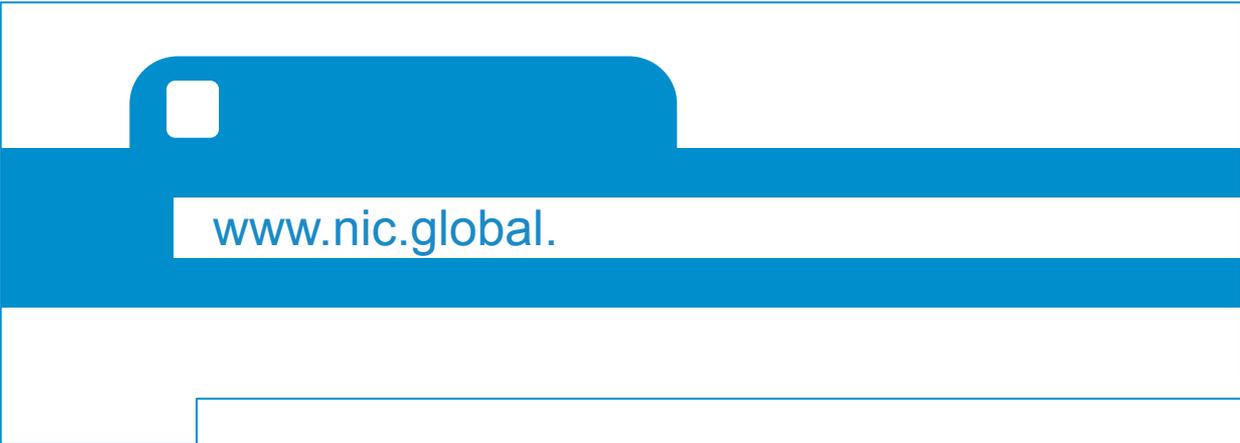
- Hundreds of new gTLDs were proposed
 - First of these TLDs delegated in October 2013
 - More long ASCII names
 - More IDN (non-ASCII) names
 - Many delegated every week
- Broke assumptions of “no/few changes” to the root

Internationalized Email

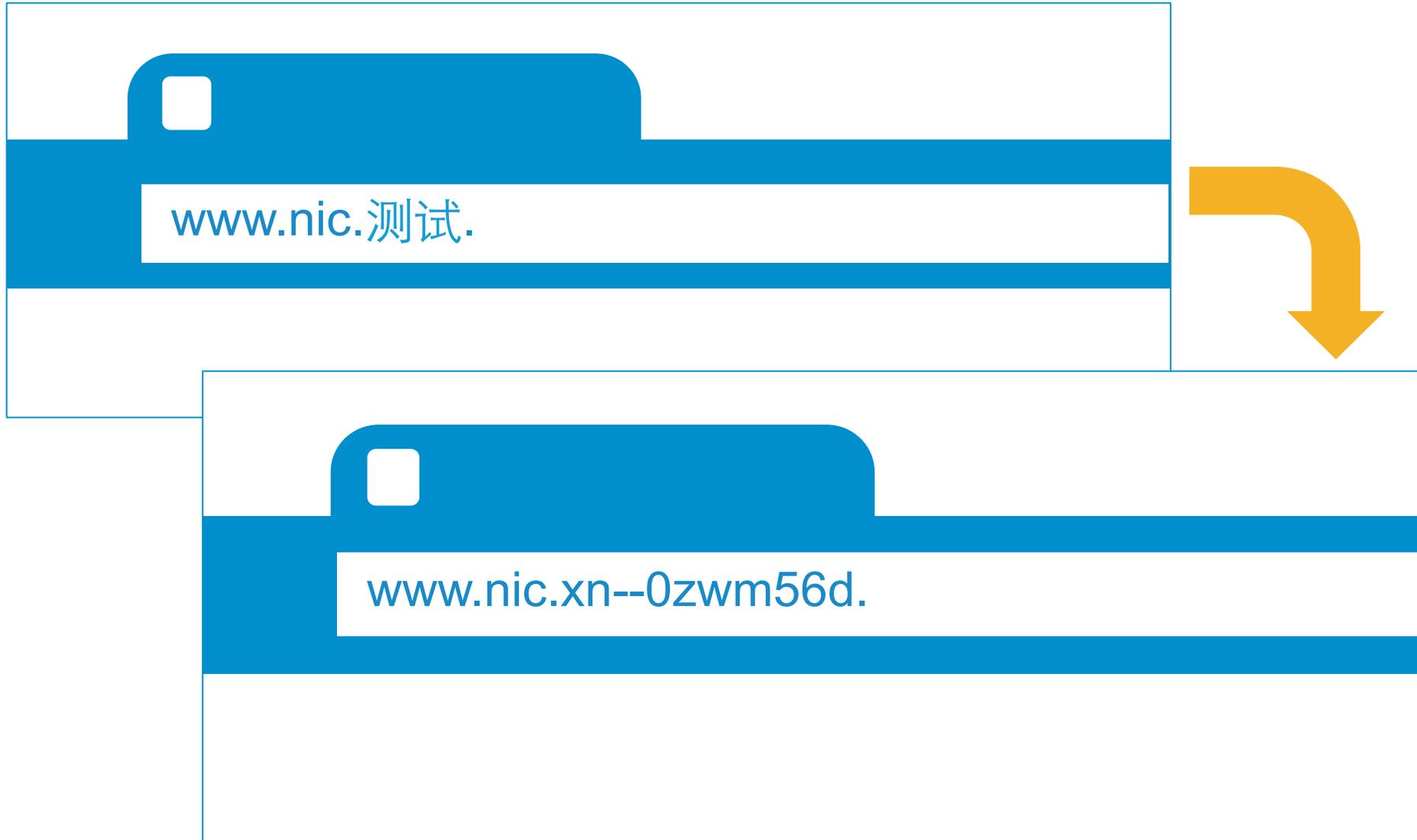
- Email names extended from ASCII to UTF8
 - IDN TLDs enabled only this
 - mistertrouble@东西.测试.
 - Internationalized email (RFC 6530) enables this
 - 麻烦先生@东西.测试.
- Broke assumptions in email systems and viewers

Bumps In the Road

Browsers Not Recognizing TLDs



Browsers Not Rendering Correct Script



Internationalized Email Not Accepted

X

Message

Send

From:

Francisco

To:

? 麻烦先生@导航.中国

Cc:

mistrouble@navigation.china

Subject:

Urgent! New project for you

Road Ahead

Universal Acceptance Challenges

- Applications and services must
 - Enable use of whatever TLD is delegated
 - Display domain and email names correctly
 - Work correctly for any name
 - Implement appropriate levels of security

ICANN 49

- Much has been said, time to move forward
 - Develop a roadmap based on community input
- ICANN to play a facilitator role
 - Motivate parties to participate
 - Foster communications
 - Support a common context

Recent Activity



External Discussions

APTLD Member Meeting

- Session dedicated to Universal Acceptance
 - Presentations and panel, including ICANN
 - Wide spread interest in topic, different perspectives
- Lessons
 - Vendor willingness and challenges
 - Legacy code base delaying progress
 - User community refining requirements

CENTR Tech Member Meeting

- Presentation on Universal Acceptance
 - Rising focus in region
- Lessons
 - Appropriate scope is TLDs, domain and email addresses
 - Realistic view of challenges for registries
 - Enhancing usability of Internet is a goal

Developing A Plan

- Based on ICANN 49 panel session
 - Spoke with registries, software/service/solutions providers
- Participated in a few real cases of problems
 - Real reports, used as trials of plan, build connections
- Discussed at APTLD and CENTR meetings
- Drafted a plan for ICANN activity
 - Document is currently open for public comment

The Plan



Formalize the Problem Statement

TLD Problem Statement

- Domain names in a TLD must be useable in applications regardless of the written script, and length or newness of the TLD
 - This captures the troubles due to broken assumptions, we now have
 - Non-ASCII/IDN TLDs
 - Longer TLD names
 - Rapid introduction of TLDs
 - Useable is an open term, to be defined by context

How Does Internationalized Email Fit?

- Internationalized email is a driver for IDN TLD adoption
 - Cultures that benefit from IDN want to benefit from email
 - A “killer app” even though not a technological enabler
- Referring to “useable”
 - Define domain names to be useable when email addresses of the same script are fully functional

Identify Stakeholder Groups

Domain Name Industry & Associations

- ICANN
- Registries
- Registrars
- DNS Hosting Vendors
- Trade Associations

User Communities

- Language specific
- Societies relying on communication media

Application Developers/Service Providers

- Distributors of software
 - Closed and open source applications
 - Mobile device apps
- Service providers
 - Social media sites
 - Webmail providers

Protocol and Operational Standards

- Protocol defining bodies
 - IETF
 - W3C
 - Unicode Consortium
- Operations best practice bodies
 - DNS-related
 - Network services

System and Network Operators

- IT Departments
 - End-user system administrators
 - Email administrators
 - Network administrators
- Internet Service Providers

Security Practitioners

- Security Protocol and Operations Engineers
- Security Policy (or Firewall) Administrators
- Threat Advisors

Facilitation



Motivate Activity

- Listening to stakeholders to gain insight
 - To grow the Internet, have to look to new sources for inspiration
- Educating audiences when needed
 - ASCII and Internet history go hand in hand, need to break old habits
- Identify gaps in energy, activity, focus

Foster Communications

- Connect stakeholders
 - Introduce when needed, help navigate
- Provide on-line collaboration
 - Remove the time and distance barrier
 - Open, transparent review of approaches
- Arrange forum discussions

Support Common Context

- Need for commonality in solution approaches
 - Novel solutions work against interoperability
- Encourage an open and transparent approach to solutions
- Document lessons learned

Areas of Attention

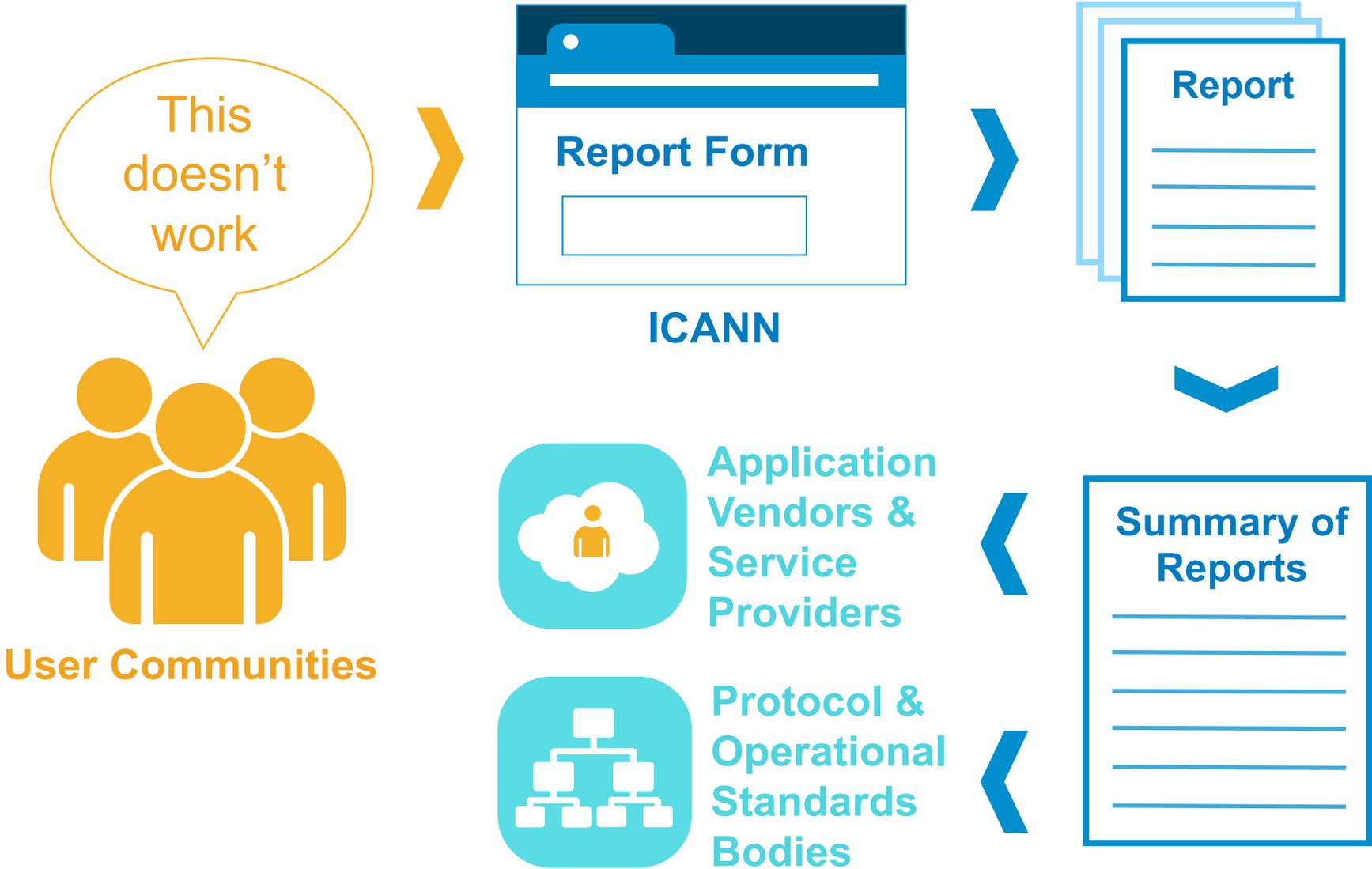
Domain Name Industry Focus

- Enablers
 - If registration and DNS hosting don't work, nothing else can be built
- Familiarity
 - ICANN has existing relationships to rely upon

Broader Horizon

- Covers social media sites, webmail, browsers, etc.
 - List is unstructured to avoid setting incorrect priorities
- Work is progressing here
 - Want to tap in to learn
 - Perhaps even get ahead and help

Establishing a Reporting Mechanism



Call to Action



What's In It for Me?

Domain Name Industry & Association

- Some of the challenges ahead
 - Open nameserver names (IDN) and contact information (email) to all scripts
 - Provide native-script tools for testing IDN
- The payoff
 - Foster user choice – more avenues for registration
 - Build consumer confidence – work in their script
 - Competition – permit registrants flexibility in naming

User Community

- Some of the challenges ahead
 - Define what constitutes “usable”
 - Provide locale and cultural or business use detail
 - Determine way to measure progress towards goal
- The payoff
 - Get the Internet you want

App Vendors/Service Providers

- Some of the challenges ahead
 - Improve timeliness and accuracy in recognizing TLDs
 - Upgrade user interfaces, many improvements possible
 - Keep mobile applications on par
- The payoff
 - Wider use through growth of the Internet population
 - Expand access via new devices (mobile, tablet)

Protocol and Operations Standards

- Some of the challenges ahead
 - Generate transition plans
 - Document testing criteria
- The payoff
 - Raising the population of users
 - Improving the network
 - Enabling further innovation

System and Network Operators

- Some of the challenges ahead
 - Selecting and deploying tools that remove barriers
 - Testing, trialing configurations
- The payoff
 - Fewer trouble tickets
 - More productive troubleshooting

Security Practitioners

- Some of the challenges ahead
 - Develop safe protocols for non-ASCII identifiers
 - Develop rules to avoid “confusingly similar” names
 - Build understandable, auditable (firewall) rules
 - Limit false positive alarms
- The payoff
 - Safer Internet

Next Steps

- Draft roadmap is now open for public comment
 - <https://www.icann.org/public-comments/tld-acceptance-initiative-2014-06-18-en>
- Publish final roadmap
 - Include public comments
- Follow the roadmap
 - Perform the facilitation role (or as advised by the community)

Questions & Answers

- Draft Roadmap Public Comment
 - <https://www.icann.org/public-comments/tld-acceptance-initiative-2014-06-18-en>
 - Other resources listed on that page

Social Media



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Upcoming Global Domains Division Sessions

Check schedule for times & locations: <http://london50.icann.org/schedule>

- **25 June 2014**

- Whiteboarding Session with IRTP - C IRT
- IDN Root Zone LGR Generation Panels Workshop
- ICANN's Security, Stability & Resiliency Team Outreach Session
- New gTLD Registry Operator Engagement
- User Workshop for GDD Portal