Introduction to Universal Acceptance (UA)

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Agenda

- What is Universal Acceptance (UA)?

- Why Does UA Matter? Why is it Important in Africa?

- Make Your Systems UA-ready

- Role of Community in Achieving UA

- UA Training and Outreach

- UA Day

Meaningful and Broader Access

If you talk to a man in a language he understands, that goes to his head.
If you talk to him in his own language, that goes to his heart.

Nelson Mandela

Universal Acceptance (UA) means that everyone globally should be able to access and communicate on the Internet using the domain name of their choice regardless of language or length.

Universal Acceptance of Domain Names and Email

Goal

All domain names and email addresses work in all software applications regardless of script, language, or character length.

пример.рф	**site.example**	名称@网站.域名
Internationalized Domain Names (IDN)	New gTLDs	Email Address Internationalization (EAI)

Universal Acceptance Enables Digital Inclusivity

*Consumer Choice   *Digital Inclusivity   *Multilingual Internet

- There are now more than **1,200 active gTLDs**, as well as country code top-level domains (ccTLDs) that are available in different scripts and that may be longer than three characters. These new TLDs represent cultures, brands, geographies, and special interests (e.g., .ไทย, .AFRICA, .SPORT).

- The majority of the world does not speak English as a first language.
- There are billions of people who prefer to read and write in Arabic, Ethiopic, Chinese, Cyrillic, or other scripts.

- There are **five billion I**nternet users around the world.
- **At least one billion more** are expected to come online by 2023**.** Through Universal Acceptance (UA), they can experience the full benefits of the Internet.

Categories Affected and UA-Readiness

⊙ Domain Names:
- ○ New short top-level domain names: example.sky
- ○ New long top-level domain names: example.engineering
- ○ Internationalized Domain Name (IDN):   คน.ไทย

⊙ Internationalized email addresses (EAI):
- ○ ASCII@ASCII (new and long TLD)   ekrem@misal.istanbul
- ○ ASCII@IDN   marc@société.org
- ○ Unicode@ASCII   测试@example.com
- ○ Unicode@IDN   ईमेल@उदाहरण.भारत
- ○ Unicode@IDN; right to left scripts   ای-میل@ مثال.موقع

Key Principles of UA Readiness

Accept	Validate	Process	Store	Display

ICANN's Universal Acceptance Program

- ◉ Support UA Steering Group (UASG) uasg.tech
  - ○ Tech, EAI, Comms, Measurement Working Groups
  - ○ UA Local Initiatives, UA Ambassadors

- ◉ Outreach and Trainings
  - ○ UA remediation and training programs are conducted around the world.
  - ○ Case studies, e.g., [Supporting a Culturally and Linguistically Diverse Internet Through EAI – How Coremail and THNIC Made it a Reality](#)

- ◉ IDN and UA Steering Committee of ICANN
  - ○ Plans and coordinates cross-functional work on IDNs and UA

Why Does UA Matter?

UA Provides Business Opportunities

* Competitive Advantage   * 9.8+ Billion Opportunity * Reduce Technical Debt

      * Social Responsibility   * Serve Local/Global Audiences

- Potential to unlock billions in revenue from untapped customers.

- A UASG study, conducted in 2017, found that the Universal Acceptance of domain names is a [$9.8+ billion opportunity](), which is a conservative estimate.

- UA-ready systems will have a **first-mover advantage** and the potential to capture new increasing revenue streams.

- **The investment to update systems** is far outweighed by the revenue potential from becoming UA-ready.

UA Delivers Career Opportunities

* Competitive Differentiator   * Skill Development   * Global User Experience

- UA is the new competitive differentiator every developer should have in their skill set.

- Becoming proficient in UA does not require learning a new category of coding, but rather builds upon existing skill sets to expand systems to recognize and support URLs and email addresses in all character lengths and supported scripts.

Why is UA Important for Africa?

- Around 1.2 billion people, ~77% of whom do not use the Internet.

- Main scripts being used in Africa: Latin (English, French), Ethiopic, Arabic.
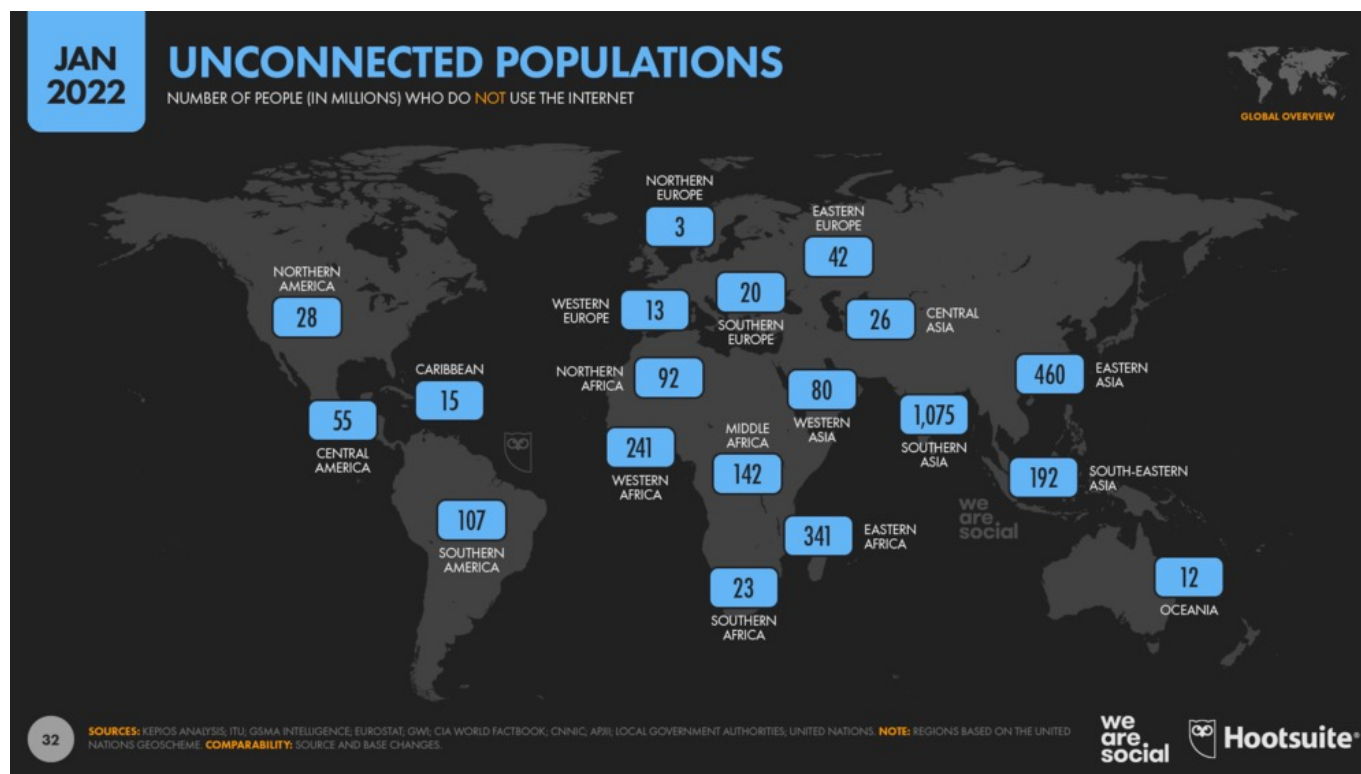
Potential Growth in Africa

- Africa is the youngest and fastest-growing continent. It is expected that Africa's population will double by 2050.

- By 2050, Nigeria's population is expected to double, overtaking the USA.

- Here's a useful graphic to help put the true size of Africa in perspective:
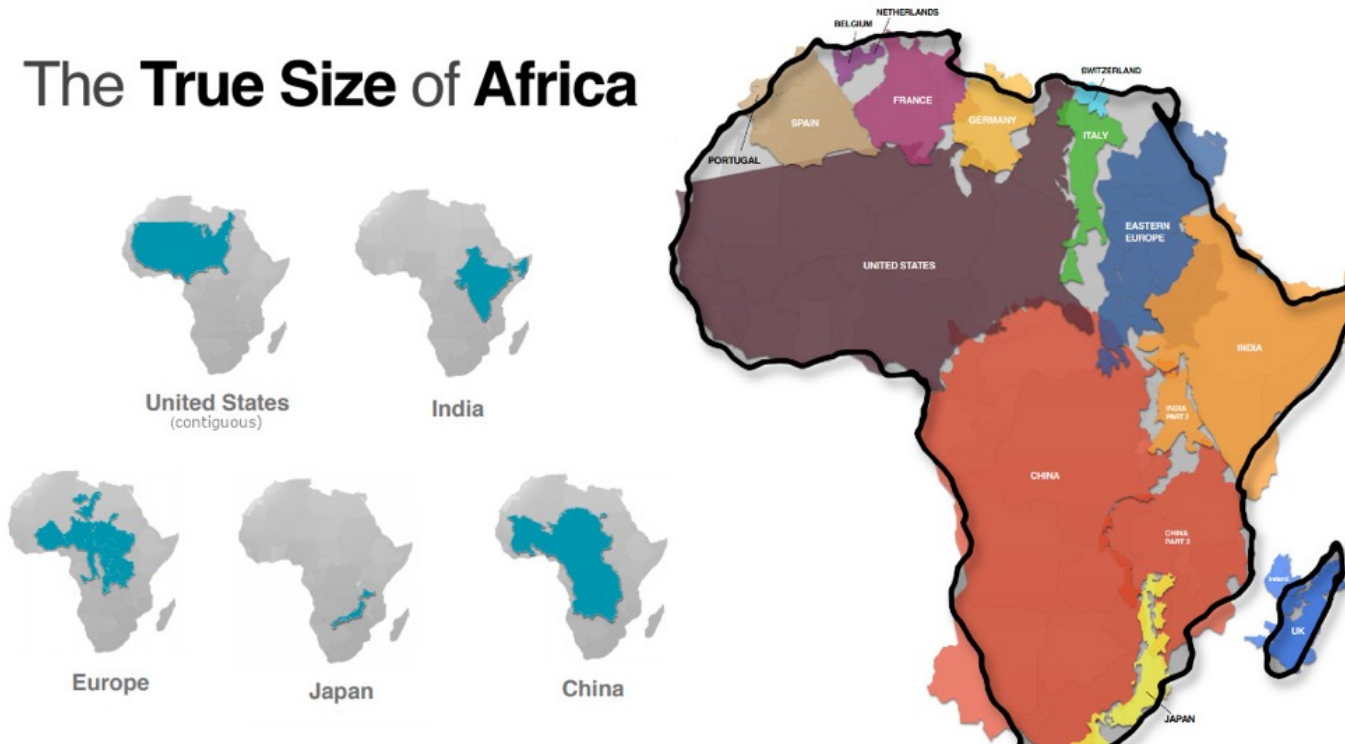
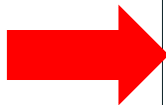(Courtesy: The Visual Capitalist).

Make Your Systems UA-Ready

Make Your Systems UA-Ready

UA-readiness requires a considerable effort by all of us! Start with testing your own systems and email addresses with below resources.

- o [UASG 004](#): Test Cases for UA Readiness Evaluation
- o [UASG 026](#): UA-Readiness Framework

Is your email server globally inclusive?

https://uasg.tech/eai-check/

Programming Languages Solutions

Functional minimal running prototypes with the libraries and programming languages were developed as example code and best practice for developers to follow in their work.

Programming languages	Java	JavaScript	Python3
Libraries	commons-validator	nodemailer	idna
	guava	idna-uts46	email-validator
	Icu	validator	smtplib
	jakartamail		

* Two different Minimal Viable Products (MVPs) were developed, each making use of a different main library: one for domain names using IDNA-related libraries, and the other one for EAI-related libraries.

* Code samples that support UA are public and free for any developers on GitHub. https://github.com/icann/ua-code-samples

* Non-UA-ready libraries are being reported on via public bug trackers and support is provided while addressing UA shortcomings.

Email Address Acceptance by Global Websites

EAI Acceptance 2017 to 2022

Legend: 2022, 2020, 2019, 2017

Categories (top to bottom):
- arabic.arabic@arabic
- chinese@chinese.chinese
- Unicode@ascii.ascii
- ascii@ascii.idn
- ascii@idn.ascii
- ascii@ascii.newlong
- ascii@ascii.newshort

X-axis: 0% to 100%
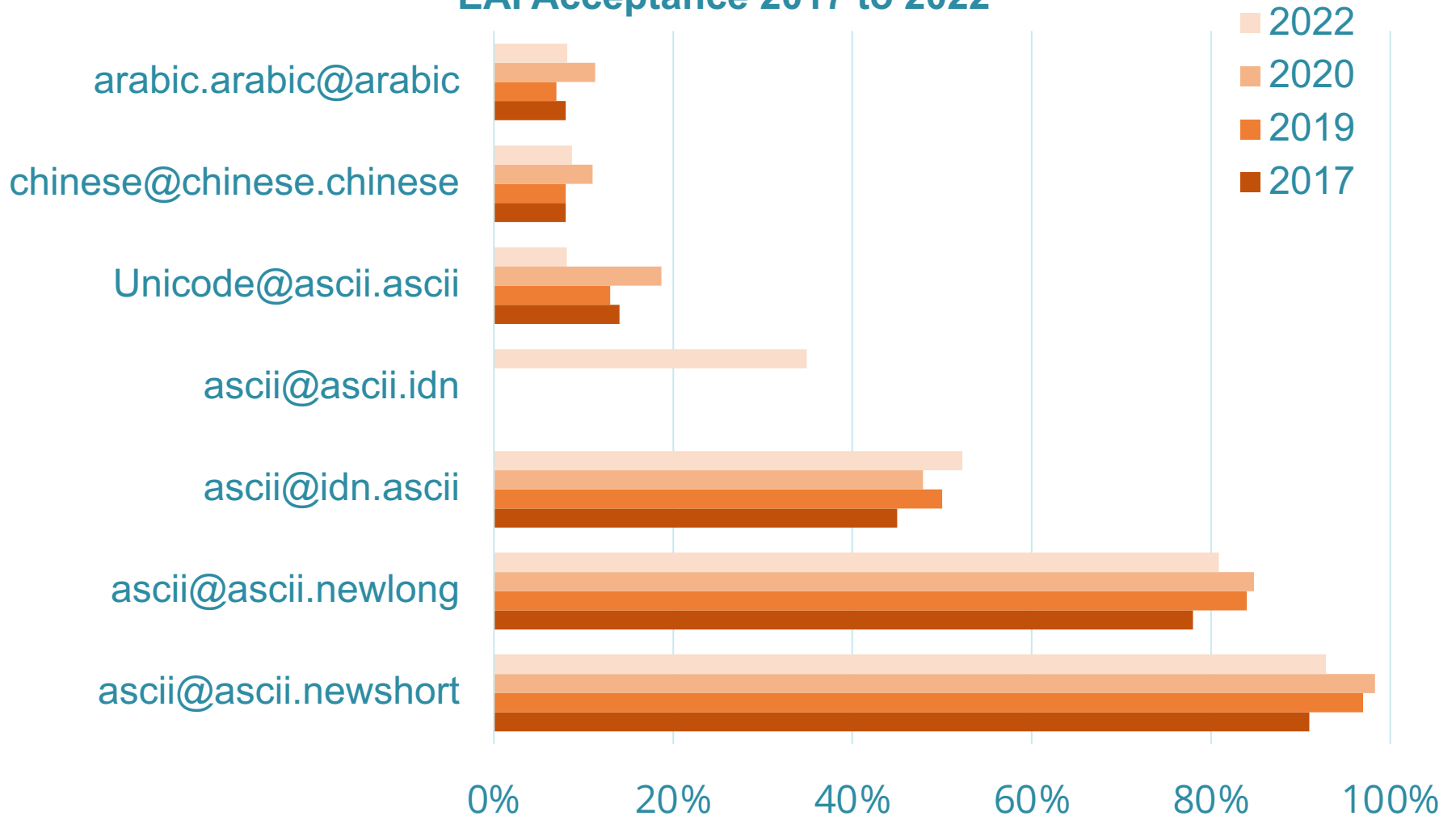
EAI Support Across Email Servers

A total of 2,506,329 IP addresses tested from 35,521,173 mail servers on gTLDs.

Tested IP Addresses

■ '21 Q4   ■ '22 Q1   ■ '22 Q2

	did not respond	did not support internationalized email	were set up to accept an internationalized email
'21 Q4	32.33%	60.63%	7.04%
'22 Q1	32.82%	59.93%	7.24%
'22 Q2	33.06%	59.61%	7.32%
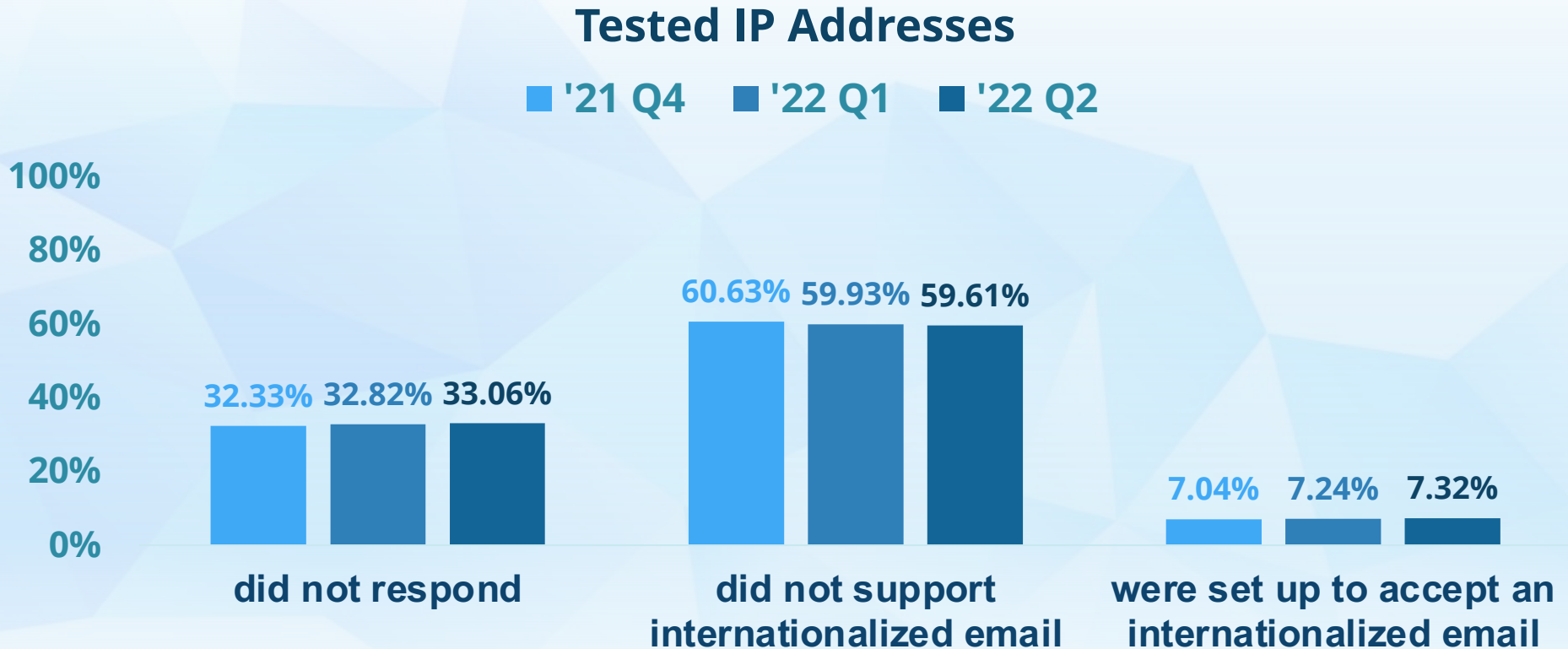
- EAI Support Survey Tool code available for ccTLDs:
  https://github.com/icann/eai-survey-tool.

Role of Community in Achieving UA

Role of Community in Achieving UA

UA requires a joint effort by all of us! So, what can be done next?

1. ALSes can work with GSE and UA Ambassadors to ensure that their domain names, and online platforms are compliant with Universal Acceptance.

2. ALSes can conduct awareness activities at the local level (ICANN GSE/IDN and UA teams and the UA Ambassadors are ready to help).

3. UA reforms are needed in governments, academia, domain name industry, and technology organizations, etc.

4. Developers should update their systems by deploying UA-ready tools and [UA-ready code samples](#).

5. TLD registries, registrars, resellers, and local domain name organizations should review their systems to become UA-ready (see [UA Roadmap](#)).

6. End users should demand more UA-ready systems and report non-UA ready systems and applications (report issues at https://uasg.tech/global-support-center/).

Universal Acceptance Local Initiatives

Objective: To interact with local stakeholders to promote UA-readiness through:
o   Local community outreach and engagement
o   Technical training

Active Local Initiatives
o   China
o   Commonwealth of Independent States and Eastern Europe (CIS-EE):
     Armenia, Belarus, Georgia, Latvia, Russia, Serbia, Ukraine
o   India
o   Sri Lanka
o   Thailand
Help us establish new UA Local Initiatives in Africa!

UA Ambassadors in Africa:
o   Abdalmonem Galila – Egypt
o   Malick Alassane - Benin
o   Mark Elkins – South Africa
o   Abdulkarim Oloyede - Nigeria

Please contact us at info@uasg.tech if you are interested in starting a Local Initiative in your country or region, or to become UA Ambassador.

UA Training Programs

Universal Acceptance Training Programs

All UA training programs are available on https://www.icann.org/ua-training-en

1. ICANN Learn - Universal Acceptance Course (basics of UA)
2. UA Technical Training Programs (Java, Python, Email Server for EAI support)
3. Regional Training Programs about UA (combination of basics and technical)

Date	Session	Audience	Description	Recording
Tuesday, 14 December 2021 12:30-14:00 UTC	Email Address Internationalization (EAI) Configuration	Technical (systems)	A detailed training on how to configure email systems to support Email Address Internationalization (EAI).	Recording Slides
Tuesday, 18 January 2022 12:30-14:00 UTC	Programming (in Java) to Support Universal Acceptance	Technical (programmers)	A detailed training on how to design and develop applications and systems to support UA.	Recording Slides
Tuesday, 15 February 2022 12:30-14:00 UTC	Universal Acceptance: Its Impact and Next Steps	ccTLD managers, local regulators, tech, and business	A discussion on how UA issues impact African communities, how best to address these issues, and the business opportunities presented by being UA-ready.	Recording Slides

NEW COURSE

Introduction to
Universal Acceptance

//*.*/
Universal Acceptance

Let us know if you would like to volunteer as a UA technical trainer:
info@uasg.tech

Technical Engagement

Technical Education and Awareness to the Developers' Network

One of the major challenges for UA adoption is a lack of awareness among software developers developing and deploying end user applications and services.

The decisions software developers will make at the microlevel make a big difference for UA support

No	Question	Forum
1	non-latin email address validation	Stackoverflow
2	Validating email addresses using jQuery and regex	Stackoverflow
3	Properly validating e-mail addresses	Reddit
4	Is my new gTLD causing it to get filtered as spam?	Serverfault

Two blog posts were written by a developer on important aspects of UA:
Universal Acceptance of Domain Names and E-mail Addresses - What is the issue?
What is the ultimate goal of the Domain Name and Email ID Validation?

Planning for Universal Acceptance (UA) Day

Objectives of UA Day

In order to mobilize the technical community to become UA-ready, UA Day aims to rally local, national, regional, and global organizations to create a "buzz" around adopting UA.

- Share UA challenges and current gaps in UA technology.

- Drive change towards the UA-readiness of all software, systems, and devices.

- Motivate technical and government decision makers towards UA adoption.

- Create awareness of UA-related issues in the technical community.

- Create awareness of UA solutions in the technical community.

- Rally language communities together around UA, and towards enabling policies to promote UA adoption.

- Celebrate the achievements of UA so far.

UA Day Strategy

UA Day will be a unique event, planned at three levels to conduct outreach to industry and academia, run hackathons, and more.

1. Local, national events
   - To be organized by UA Local Initiatives, UA Ambassadors and other community stakeholders, e.g., ALSes, ISOC chapters, etc.

2. Local and regional events
   - To be organized in each geographic region with technology industry and community stakeholders, e.g., RALOs, regional business associations.

3. Local, regional and global events
   - To be organized every year starting in 2023, with technology industries and other global stakeholders.

UA Day Planning

⊙ In developing the plans around UA Day, the UASG seeks support, commitments or proposals for holding UA Day events from the following:

- ICANN SOs/ACs
- GAC members, who can work with their respective governments.
- Other global organizations to promote UA, e.g., ALSes and ISOC chapters.

⊙ Decentralized planning

○ The UASG is developing a framework with materials and guidelines for stakeholders to organize UA Day sessions.

○ UASG will give organizations the flexibility on how to organize the sessions within this framework.

Potential Organizations to be Involved in UA Day

To organize UA Day events, the UASG will reach out to:

- Supporting Organizations and Advisory Committees (SO/ACs)
- Regional organizations, RALOs, and ALSes
- ISOC Chapters
- Academia
- Language communities
- Government departments
- Global technology organizations, industry bodies
- Telecommunication/ICT regulators, mobile phone operating systems
- International organizations (e.g., UNESCO, etc.)
- Relevant open-source communities
- Standards bodies (e.g., Unicode,W3C,WHATWG,etc.)
- Registries, registrars, resellers, ISPs
- Email service providers

Outreach Package for UA Day

The UASG will develop and distribute the following outreach and training materials to collaborating organizations for UA Day events. These would cover both general messaging and technical training.

Outreach materials:
* Half-hour event
* One-hour event
* Two-hour event
* A quarter day event
* A half day event

Technical training materials:
* A full-day event
* A two-day event

Be a Part of UA Day

Contribute to UA Day events globally!

More information on how to submit event proposals will be made public in the coming weeks. Stay tuned!

A UA Day Proposal Template will be published on uasg.tech with further details on how to organize UA Day events.

Get Involved!

- For more information on UA, email info@uasg.tech or UAProgram@icann.org and visit www.icann.org/ua

- Access all UASG documents and presentations at: https://uasg.tech

- Access details of ongoing work from wiki pages: https://community.icann.org/display/TUA

- Register to participate or listen in the UA discussion list at: https://uasg.tech/subscribe

- Register to participate in UA working groups https://uasg.tech/join/.

- Follow UASG on social media:

  Twitter: @UASGTech
  LinkedIn: https://www.linkedin.com/company/uasgtech/
  Facebook: https://www.facebook.com/uasgtech/

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