Universal acceptance – behind scenes

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UA in a Nutshell

*Universal Acceptance (UA) ensures that all domain names and email addresses can be used by all Internet-enabled applications, devices and systems.*

**Vision**
All domain names and all email addresses work in all software applications

**Mission**
To mobilize the software application developers to get their products UA Ready by providing encouragement, documentation, case studies, tools and measures to deliver the right user experience to the end user

**Impact**
Promote consumer choice, improve competition and provide broader access to end users
Categories affected by UA issues

- Newer top-level domain names: `example.sky`
- Longer top-level domain names: `example.global`
- Internationalized domain names
  - Rendering problems
    - Displaying A-label: `xn--mgbh0fb.xn--mgbcpq6gpa15g`
    - Ordering right-to-left scripts: should be بحرين.مثال
- Internationalized email addresses: अजय@डाटा.भारत (email address in Hindi language)
  - Available standards not implemented by all email software and service providers making email delivery unreliable
    - Test if your email is compliant: [https://uasg.tech/eai-check/](https://uasg.tech/eai-check/)
Five Ingredients to UA Readiness

Accept
Validate
Store
Process
Display
Ingredients for a good UA meal

DISPLAY>
- Displaying domain names and email addresses is usually straightforward when the scripts used are supported in the underlying operating system and when the strings are stored in Unicode.
- If these conditions are not met, application-specific transformations may be required.

VALIDATE>
- Validation ensures the syntax correctness of the given information.
  - Domain names and email addresses can now include Unicode (non-ASCII) characters
  - The list of TLDs is growing
  - A TLD can be up to 63 characters long

PROCESS>
- There is no limit to the number of ways that domain names and email addresses could be processed.

STORE>
- RFC-defined formats, OR
- Alternate formats that can be easily translated to and from RFC-defined formats (this is much less desirable)

ACCEPT>
- Applications and services allow domain names and email addresses to be:
  - User input through interfaces, AND/OR
  - Received from other applications and services via APIs
To address the Universal Acceptance of domain names and email addresses, Universal Acceptance Steering Group (UASG) organized as a community imitative.

UASG has produced documentation to define, address the challenges and share progress, posted at [https://UASG.tech](https://UASG.tech), e.g.:

- Quick Guide to Universal Acceptance
- Quick Guide to Email Address Internationalization
- UA Case Study: Government of Rajasthan, India
- Quick Guide to Tendering and Contractual Documents

UASG is actively engaged in disseminating the information to relevant stakeholders.
UASG

• UASG is a community-based group supported by ICANN org
  • Leadership Team formed by Chair and two to three Vice-chairs
  • Coordination Group formed by the Leadership Team and Chairs of all Working Groups
  • Working Groups (details later)
  • General UA-discuss email list

• Current UASG Leadership team (March 2019-March 2021)
  • Chair
    • Ajay Data, Data Ingenious
  • Vice-Chairs
    • Dennis Tan Tanaka, Verisign
    • Mark Svancarek, Microsoft
    • Dusan Stojicevic, Gransy
UASG Action plan

- **Technology Enablers** - Organizations producing relevant standards and best current practices and providers of software programming languages, tools and frameworks

- **Technology Developers** - Organizations and individuals developing and directing applications

- **Email Software and Service Providers** – Organizations and individuals providing internationalized email software and services

- **Influencing Individuals and Organizations** - Individuals at local and international level who can help promote UA Readiness, and organizations which can be used to spread the UA message more broadly

- **Government Policy Makers** - Government officials, as an explicit group, are included to try to generate demand for UA Ready products and services through accessibility standards and procurement processes
UASG Working groups

• **Technology WG** - Plans, coordinates and oversees work on standards, best current practices, programming languages, tools and development platforms.

• **Email Address Internationalization (EAI) WG** - Plans, executes and oversees engagement with email software and service providers to make them EAI Ready

• **Measurements WG** – Plans, oversees and directs the measurement efforts for UA readiness

• **Communications WG** – Plans and develops communication strategy and oversee its execution, in collaboration with other WGs

• **Local Initiatives WG** – Plans, develops and oversees execution of local initiatives in various geographies

• **UA Ambassadors WG** – Plans and executes training and outreach in local regions
UASG - in practice

- Only group that treats ALL issues in IDNs, New Gs and EAI
- New leadership elected in on ICANN meeting in Kobe
- Action plan for new fiscal year
- Currently – WGs in forming
- Local initiatives
“don’t ask what UASG can do for you...”

• Open invitation for all:
  1. WGs and Local Initiatives
  2. Join ua-discuss mailing list
CASE> IDN email a.k.a. EAI – what is it?

• EAI - RFCs from 2013
  (https://datatracker.ietf.org/group/eai/documents/)
• Examples: душан@стојичевић.срб

Left side is not the same code as right side
• User name is UNICODE (UTF 8)
• Domain name side is still puny code – ASCII
UTF 8 support needed on mail servers
Issues

Same problem as IPv6 and DNSSEC – adoption
1. Validation – forms on Internet displays “email address is not valid”
2. Representation – ?????@xn-87438.xn-1213
3. Accepting emails - Can I register domain name in ccTLD or gTLD, by using EAI?
4. Mail servers – not accepting UTF 8 and unable to create account
...
How to solve – update software, or create it according to the RFC
https://uasg.tech/documents/
Two accounts in one

To guarantee that the mail is received:
• Alternative mailbox in ASCII
• Passing through the servers without UTF 8 support with pure ASCII alternative email address
EAI checker

To check UTF 8 support (EAI) on your email server:

• https://uasg.tech/eai-check/

This test is checking your mail server.
Who supports UTF 8

“Half” solutions (receive/send EAI)
• Microsoft
• Google
• Postfix (???)
• ...

But not Apple with default mail settings

“Full” solutions (receive/send/create account)
• Xgen (Apple solved via app)
• Coremail
Any qUAstions?

Thanks!

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• Visit [https://uasg.tech](https://uasg.tech) to access all UA documents and presentations
• Contribute to UA
  • [Join UASG Working Groups](https://uasg.tech)
  • [Join UA-discuss list](https://uasg.tech)
• For further information, please email [info@uasg.tech](mailto:info@uasg.tech)