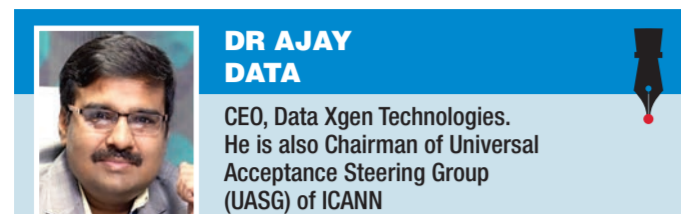


● THERE IS A NEED TO ENSURE THAT ALL SYSTEMS ARE UA-READY AND ABLE TO ACCEPT ALL DOMAIN NAMES AND EMAIL ADDRESSES IN ANY VALID SCRIPT

● UNIVERSAL ACCEPTANCE: EMPOWERING PEOPLE WITH LINGUISTIC EMAIL



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BUG IN YOUR WEBSITE, SOLVE TO ENABLE YOUR BUSINESS FOR NEXT BILLION CUSTOMERS

In this competitive world everyone is trying to get new customers and investing millions of \$s to get customers however by solving a small bug into your website / software, you may get pie from next billion people online.

There are approx. 1500 Top level domains, Internalized Domain Names, and millions of internationalized email address, if not accepted well, not only brings loss to the organization but also brings bad reputation for the website/application. It is time to be aware about these small but significant impactful challenges and solve them to attract new customers.

PEOPLE, WHO ARE DEPRIVED BECAUSE OF LANGUAGE BARRIER, WILL ENJOY THE POWER OF INTERNET WITHOUT ANY FURTHER LIMITATIONS

India's internet users expected to register double digit growth to reach 627 million in 2019, driven by rapid internet growth in rural areas, as per a Report by Kantar IMRB. It noted that the number of internet users in India has registered an annual growth of 18 percent and is estimated at 566 million as of December 2018, a 40 percent overall internet penetration. This growth has resulted Indian language users surpassing English users. The vernacular content is getting consumed by people in their preferred way, however still users are expected to know bit of English, as without typing the domain name they cannot reach to a website or send an email. So considering people are

going to have email address in their own language and if they visit your website and fill email address in enquiry form or contact us form and your website do not accept, validate, process, store and display email address correctly, you are going to lose the customers and will not be able to leave on the new billion of customers coming online.

It may be unbelievable to you that your website has a bug, and you must be under strong belief that your website works fine and do not have any issue. I would strongly encourage to get a free linguistic email address from DataMail app and try to fill that email address in your enquiry form, and you will be surprised that your website is likely to reject that address which is otherwise valid. My Email address is अजय@डेटा.भारत in Hindi, try to see if I can become your customer and you are able to send me invoice or welcome email successfully.

In case your enquiry form Accept, Validate, Process, Store and Display email address correctly, you may like to share this "Universal Acceptance" ready story with media and on uasg.tech website. Who knows, that your story may become a global case study and motivational story for people to learn from you.

To understand this in more details, let's understand some technical building blocks of the revolutionary future of internet.

UNIVERSAL ACCEPTANCE

Universal Acceptance (UA) is the principle that every domain name and email address should function within all applications regardless of script, number of characters, or how new it is. For the principle of Universal Acceptance to be realized, all valid domain names and email addresses must be accepted, validated, stored, processed and

displayed correctly and consistently by all Internet-enabled applications, devices and systems.

Going forward, our large global population will have access to Internet. People, who are deprived because of language barrier, will enjoy the power of Internet without any further limitations. We can imagine that IDN + EAI + Aliasing are going to create massive impact on the entire Internet infrastructure, its adoption at mass scale and impacting billions of people life positively. The need to have access of linguistic email address through Web is a must to digitally empower everyone.

KEY COMPONENTS

Internationalised Domain Name (IDN), Punycode and Email Address Internalisation are key components to make linguistic email technology functional and universally acceptable. Punycode represents IDNs with the limited character set (A-Z, 0-9) supported by the domain name system.

● **IDN:** An IDN is an Internet domain name that contains at least one label that is displayed in software applications, in whole or in part, in a language-specific script or alphabet, such as Arabic, Chinese, Cyrillic, Tamil, Hindi or the Latin

alphabet-based characters with diacritics or ligatures, such as French. These writing systems are encoded by computers in multi-byte Unicode. Internationalized domain names are stored in the Domain Name System as ASCII strings using Punycode transformation. India adopted IDN in 2014 with .???? (Hindi equivalent of India) and NIXI launched domain registration in 15 Indian languages.

● **EMAIL ADDRESS INTERNALIZATION (EAI):** EAI is the protocol that allows email addresses to have non-ASCII characters i.e. either in Mailbox name or Domain name or both.

A Hindi language email address संपर्क@डेटा.भारत is an example of valid email address. The real life problem arises with an EAI compliant email software and non-EAI compliant software co-exists in the email world. This creates a challenge to deliver an EAI email to non-EAI compliant email server and this led to another need of innovation and protocol to solve the problem.

● **DOWNGRADING WITH ALIASING:** Internationalization (UTF8SMTP) extension allows UTF-8 characters in SMTP envelope and mail header fields. To avoid rejecting internationalized Email

messages when a server in the delivery path does not support the UTF8SMTP extension, some sort of converting mechanism is required. This is known as Downgrading mechanism for EAI.

So, when an EAI compliant server tries to deliver an email containing Unicode characters in the envelope and the recipient server does not announce UTF-8SMTP support, the sender server may downgrade and change the email address to its ASCII alias email address so that email communication can be established without any problem.

UASG: TAKING A MISSION FORWARD

The Internet Corporation for Assigned Names and Numbers (ICANN) manages rules around website access over Internet and supports Universal Acceptance Steering Group (UASG) which is working towards achieving truly multi-lingual Internet, one in which users around the world can navigate entirely in local languages. The group consists of over 400 global IT professionals from almost 32 countries. The Group's members come from global IT companies such as Apple, GoDaddy, Google, Microsoft, XgenPlus, Afiliias, Coremail, and Verisign and it receives financial and administrative support from ICANN.

Now, when the world has expressed confidence (As Chair of UASG & Member, Country Code Names Supporting Organisation of ICANN), we need to work collectively in taking forward Universal Acceptance Mission forward to break all barriers on internet. With dual responsibility to address UA readiness issues and provides support, the Mission aims to bring millions of people online. People across globe should not face any linguistic barrier or hindrance in writing, sharing and communicating in their own languages on internet. In nutshell, we need to ensure that all our systems are UA-ready and able to accept all domain names and email addresses in any valid script.

