

EAI Meeting 11 January 2018

The UASG, in cooperation with host Coremail, organised a gathering in Guangzhou China to further the deployment of EAI (Email Address Internationalisation).

Guangzhou is home to several very large email software and service providers.

Attendance:

XgenPlus: Ajay Data & Ashish Modi	Microsoft: Mark Svancarek, Carolyn Liu and Yi Fan	CNNIC: Jiankang Yao
MIIT: Ya Zhang	Coremail: Marvin Woo	Afilias: Kun Qian
NetEase: Zhilin Chen, Shaotu Li	ICANN: Jianchuan Zhang	Tencent: Shaotang Wen
Guoxu Technology(registrar): Qiang Li	China Telcom(189.cn): Hao Sun	CONAC: Yan Wu and Jian Chen
UASG: Don Hollander	Standcore LLC: John Levine	Charles McCathie Nevile
MCIT Egypt: Abdalmonem Tharwat Galila		

Transformation

Background: Until all mail systems are EAI ready there will be a need to transform some non-ASCII email addresses to facilitate interaction with legacy systems.

A sending email system may check the receiving email system to determine if it announces SMTPUTF8. If it doesn't, the sending email system may want to transform the FROM address and possibly other addresses in the email header to a traditional ASCII based email address.

Punycode transformation of the domain name part of an email address is fine.

Transformation of the mailbox portion of the email address:

Principle: The sending email system shall only transform the mailbox name of an address that they have or can obtain authoritative transformation instructions.¹

Principle: Algorithmic transformation on the fly (such as using a Punycode transformation) of the mailbox name is bad practice.

¹ Authorisation can be by the sender's own rules (such as using an alias stored in the mailbox details. A non-EAI ready email system may publish an authoritative transformation table before it becomes Phase 1 EAI Ready.

ASCII Alias Address: Using a pre-stored ASCII Alias mailbox name (or full email address) is recommended practice.

Downgrading: The UASG believes any 'downgrading' of an EAI address to an ASCII address should only use a pre-established Alias from an authoritative server – generally the operators own system. No automated transformation of the mailbox name should occur.

Actions: The Introduction to EAI being written by John Levine will reflect this position.

Actions: Don to prepare a blog post.

Status of Email Systems

This discussion was used to help clarify the terms used around different phases of EAI Readiness that an Email System may have.

Email systems consist of several components:

- A User interface (MUA)
- Submission and Transport interfaces (MSA and MTA)
- A Mail Store which will store mail and support IMAP and/or POP3 interfaces
- In many cases, Web mail which combines MUA and MSA and mail store client.

An Email system may include ancillary services such as spam and Virus filtering.

An EAI Email Address is one that has non-ascii characters in the mailbox name or the domain name or both.

Phases of EAI Readiness

Phase 1 Ready: Email system can accept email with EAI Addresses and can send mail with EAI Addresses. It is not able to host an EAI Address. *(We think Gmail is Phase 1 ready)*

Phase 2 Ready: Email systems can host email with EAI Addresses as well as pass Phase 1 Readiness. *(We think Coremail, XgenPlus, OpenFind, Thruwave and Raseel are Phase 2 Ready.)*

EAI Widget

Group agreed that \$1,000 would be well spent to develop an EAI detection widget for the UASG Website to make simple tests of MTAs. The Widget would:

- Accept email address entry – including EAI addresses
- Construct validation is not planned, but could be included
- Find the relevant MX record details
- Ping the relevant SMTP server to determine if an SMTPUTF response is received
- If it is, then return – Yes, EAI Capable. If not, then No, Not EAI Capable response.

Government of China's Position on EAI

Mr Zhang Ya of the MIIT advised that the Government of China would not mandate the support of EAI. But, he felt that the private sector would be keen to adopt EAI if there were a compelling business case to do so. So far, he is not aware of any such compelling case.

Visit with Tencent

During a visit with Tencent, operator of WeChat and QQ.com mail, we met with their Chief Research Officer, Head of Email operations and Head of Anti-abuse (phishing and spam) operations. They had not considered introducing EAI to their Billion mailboxes because they saw very little demand and their systems were complex. After hearing how Microsoft has spent two years pursuing EAI Phase 1, with zero demand in the United States and 'equally' complex environments, Tencent agreed that they would begin investigation.

Evaluation of Ability to use EAI addresses to create Social Media accounts

The UASG will perform a short analysis of which Social Media applications can create accounts with an EAI Address.

Action: Don to initiate account creation in Social Media applications review

EAI Documentation

John Levine presented his current thinking of the table of contents of the proposed documentation. Several suggestions were made which were noted by John.

The Introduction to EAI will effectively define EAI Readiness from the UASG perspective, so a careful review of the first draft will be quite important.

Action: John to produce first draft of Introduction to EAI for community review by middle of February, ideally before ICANN61.

EAI Day

The first EAI is tentatively set for 2019 on the anniversary of the formation of the UASG. Criteria is pending the production of an Evaluation of email software and services.

Statistics

It was felt that obtaining some statistics on EAI Readiness would be useful for tracking progress.

Don to circulate a note asking for suggestions of measurements, such as, number of EAI Phase 1 Capable mailboxes, number of EAI Mailboxes deployed, number of messages with EAI Headers.

Technical and Other Issues Identified

During the meeting, the following technical challenges were identified;

- Support for Digital Signing (S/MIME and DKIM), DMARC, ARC, and other anti-abuse standards
- Message threading tracking as message IDs may alter when aliasing is invoked.
- Because of the way that Chinese is typed using phonetics (pinyin - <https://en.wikipedia.org/wiki/Pinyin>), the Chinese community is familiar with English characters and how to find them on a keyboard.

- If there is a gathering of the Internet Industry in China in 2018, the UASG should be there providing an update on EAI and encouraging registries and registrars to have a solution for their customers.
- There was a discussion of ICANN's own UA Readiness. Don report that the UASG has received updates from ICANN IT since the June 2015 meeting and that these are available on the UASG.tech website under presentations. ICANN IT, like many IT operations, is dependent on their software providers to be UA Ready.

Search Engine Study

The meeting urged the UASG to study how search engines in China (Baidu, Bing, Sogou) index and display IDNs.

Industry Updates

Xgen Plus

- XgenPlus offers server and client-side applications for email. (They are also an ISP and Registrar for the .in and .bharat TLDs. They also offer a range of other IT services. See <https://www.xgenplus.com/>)
- They offer cloud-based retail email services
- The Government of India has announced a project to provide all government employees with an EAI Address using XgenPlus software running on Government infrastructure
- The State of Rajasthan is offering all citizens (70 Million) a free email address using XgenPlus software running on State of Rajasthan's infrastructure.
- XgenPlus announced a free EAI mailbox box in Chinese for everyone in China

Coremail

- Coremail operates in the large enterprise space by providing software that runs on the client's infrastructure. More information about Coremail can be found at <http://www.coremail.cn/>
- Coremail's EAI testbed has 120,000 addresses deployed.
- Coremail offers access to Chinese Email addresses at <http://zh.icoremail.net/>
- In China it is difficult to find engineers who are fluent in a language other than Chinese and English, so configuring software for other markets is, at the moment, not a high priority.

NetEase

- NetEase operate 163.com, 126.com, Yeah.Net, 188.com combining Free Email, Paid Email, and Corporate Email
- NetEase uses Coremail software for their back end.
- NetEase has more than 900 Million free email addresses supported
- NetEase is building a facility to include aliases in their user records so that EAI with ASCII Aliasing can be deployed.
- NetEase offered those in attendance test EAI Addresses

Microsoft

- Outlook 2016 for Windows supports EAI since 2016

- Office 365 support for cloud-based services is rolling out. Expected complete 1st quarter 2018
- Outlook Mobile and Outlook Universal development complete. Deployment TBD
- Mac Office expected ETA 2nd quarter 2018. TBC
- Exchange Server – ETA 4th Quarter 2018. This is the product deployed in enterprise operations.
- Support for EAI hosting (EAI Phase 2) not yet scheduled.

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