

Practice of EAI support in Coremail

Coremail邮件系统

https://zh.icoremail.net/coremail/XT3/index.jsp?sid=BAAJnfUUyZXkdYRoKeUUIpvAuCRUjgze

Coremail 李靖欣@互联网.中国 自助查询 - 锁屏

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已发送

其他文件夹

个人通讯录

邮箱中心

文件中心

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回复

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标记为

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发件人: 吴悦盈 <吴悦盈@论客.中国>

时 间: 2023年03月25日 21:47:19 (星期六)

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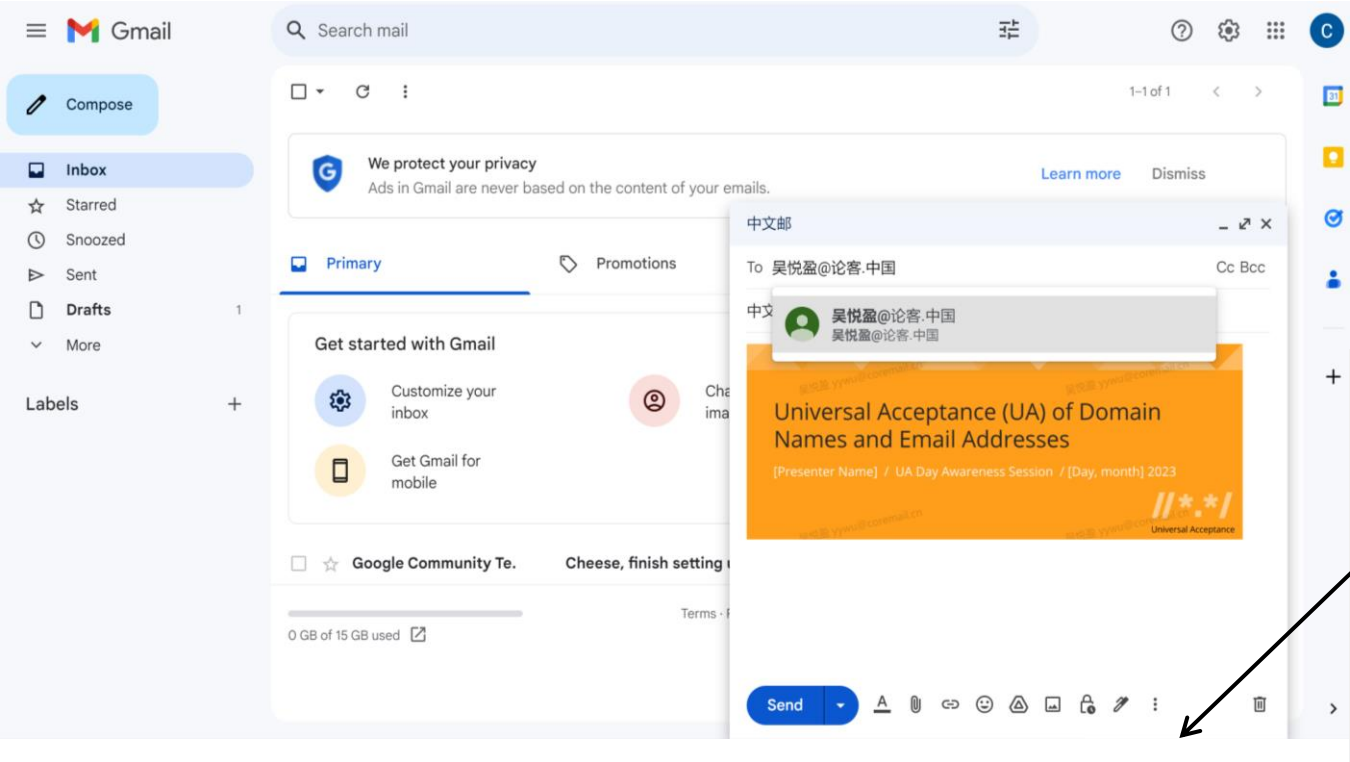
吴悦盈 yywu@coremail.cn

Universal Acceptance (UA) of Do

Names and Email Address

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中文邮

Cheese Woo <cheesewoo98@gmail.com> 2023-06-28 11:28:31
发送至 吴悦盈；

发件人 Cheese Woo <cheesewoo98@gmail.com>
收件人 "吴悦盈" <吴悦盈@论客.中国>;
时 间 2023-06-28 11:28:31
大 小 212.9 KB

吴悦盈 yywu@coremail.cn

发件人 Cheese Woo <cheesewoo98@gmail.com>
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Coremail邮件系统

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🌟 星标联系人邮件

📧 草稿箱

📧 已发送

📁 其他2个文件夹

🗑️ 已删除

🗑️ 垃圾邮件

📁 邮件标签

📧 为邮件标记不同颜色的标签，更好的管理各类邮件。

➕ 添加标签

📁 邮箱中心

📧 登录全新的邮箱大师网页版，便捷管理多个网易邮箱

立即体验

📁 文件中心

📧 邮箱附件

⏪ 返回

🔄 回复

📧 回复全部

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🗑️ 删除

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📧 Universal Acceptance (UA) of Domain Names and Email Addresses

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📧 精简信息

发件人: "吴悦盈" <吴悦盈@论客.中国> <> +

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抄送人: "吴悦盈@互联网.中国" <吴悦盈@互联网.中国> <> +

时 间: 2023年03月24日 16:43 (星期五)

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Universal Acceptance (UA) of Domain Names and Email Addresses

吴悦盈 yywu@coremail.cn

Universal Acceptance

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中文邮

发件人: 李靖欣@互联网.中国 <>

时 间: 2023年3月24日 (星期五) 下午2 : 40

收件人: 吴悦盈@论客.中国 ; 吴悦盈 <289667698@qq.com>

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Names and Email Addresses

[Presenter Name] / UA Day Awareness Session / [Day, mo

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Does Your Email Server Support EAI?

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Universal Acceptance

+

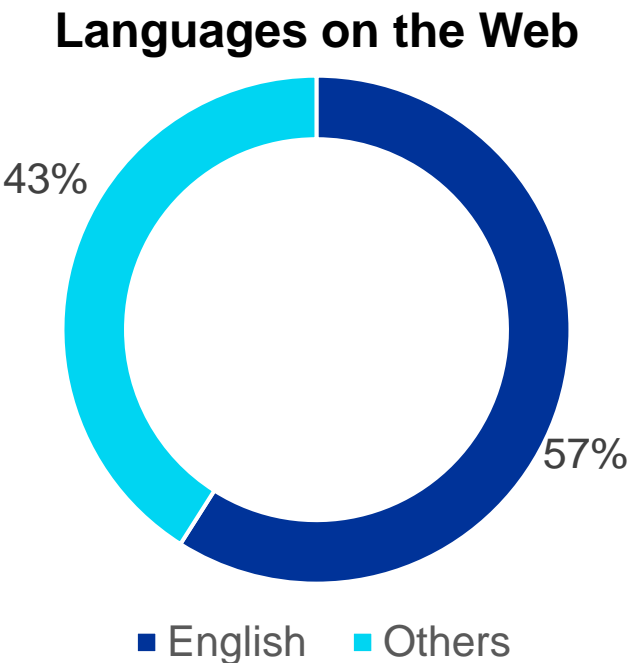
Email Address Internationalization

快捷回复给所有人

About Information Media Case Studies Test Your Email

We Live in a Multilingual World!

Globally, language usage is diverse. **English** comes **third** in terms of native speakers around the world, after Mandarin and Spanish. **English represents 57%** of the total written content online and **the percentage is decreasing**.



Language	Native Speakers
Mandarin	1300 million
Spanish	475 million
English	373 million
Arabic	362 million
Hindi	344 million
Bengali	234 million
Portuguese	232 million
Russian	154 million
Japanese	125 million

Source: https://w3techs.com/technologies/history_overview/content_language.

Source: <https://www.babbel.com/en/magazine/the-10-most-spoken-languages-in-the-world>

- * Initially, email addresses were also not available in local languages and scripts.
- * Email Address Internationalization (EAI) addresses this limitation and allows for having email addresses in local languages and scripts.
- * Internationalized email addresses are not related to the the text in the body of the email, which is managed through the Multipurpose Internet Mail Extensions (MIME).

- * The Coremail email system was developed in 1999 as the first mail system in China.
 - * Currently, it has more than **1 billion end users** in mainland China.
 - * Coremail has approximately **1 million users based on SaaS**.
 - * Coremail XT 5.0, is EAI-ready and its 10 million users have access to a mail system that supports the sending and receiving of internationalized emails.
-
- * **Coremail's EAI journey began in 2011** when the China Internet Network Information Center (CNNIC) and Coremail started the commercialization of multilingual email technology.
 - * In 2013, Coremail applied the international standards for multilingual email accounts and the technical standards for Chinese email accounts to the Coremail mail system. It then successfully launched email addresses in **Chinese, French, Portuguese, and Spanish** languages.
 - * In 2014, Coremail assisted other leading email providers to support multilingual email accounts.
 - * In 2015, Coremail reconstructed its own email system, **Coremail XT 5.0 to be EAI-ready, including servers and clients (Windows, IOS, Android)**.

Traditional email address

01

Only contains ASCII

In most cases, input/output requires no transcoding

02

Maximum character length

Maximum 256, same as octet limit

03

Generally case-insensitive, uppercase letters will be converted to lowercase

For example: user@example.com and User@example.com are considered the same address.

Internationalized email address

01**Different encodings may be used in different situations.**

Domain part can be encoded in UTF-8 or punycode

utf-8(U-label): 域名.公司

punycode(A-label): xn--eqrt2g.xn--55qx5d

02**While the byte length limit remains the same, due to encoding the character length limit for the user is reduced.**

A Unicode character converted to UTF-8 may result in length of 1 to 4 bytes.

03**Lower casing non-English text is a complex task.**

Case conversion is language-dependent: English I \Rightarrow i, while Turkish I \Rightarrow ı.

Does traditional Chinese need to be converted into simplified Chinese or via versa?

Challenge 1 :

The email address is a fundamental concept of the system, and EAI transformation involves every aspects of the system. Identifying all the areas that need to be modified is our biggest challenge.

We need to identify which aspects are affected first.

Possible affected aspects:

Communication

- RFC adoption: RFC 6530/6531/6532
- Internal API protocols, function parameters

Data serialization

- Database schema
- Email message data storage
- Address book storage
- Log output
- Data import/export, Ex: address book import/export
- Full text search indexing
- Internal

Email address

- User input
- Data processing

Display

- Transcoding may be required for display.

Email address extraction

- Message reading
- Log analyse
- Full text search indexing
- Text in email address related input box

3rd party libraries

- Ex: mime parsers, regex,

Challenge 2:

Communication with traditional email system.

What will happen if an email address containing UTF-8 is used to send emails to a traditional mail system?

It is likely to be bounced

Many systems in the real world have not yet been upgraded to support EAI.

EAI = Information island?

Our solution:

1. Assign a pure ASCII alias for each user.
2. When the recipient's system does not support SMTPUTF8, modify the email header and send using the ASCII alias.

Thanks

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