

Using local language character sets in
domain names and email addresses

THNIC Foundation

February 2020

Digital Divide

- Dominant of English in Internet use.
- For those who cannot speak or understand English, much of the internet is out of reach.

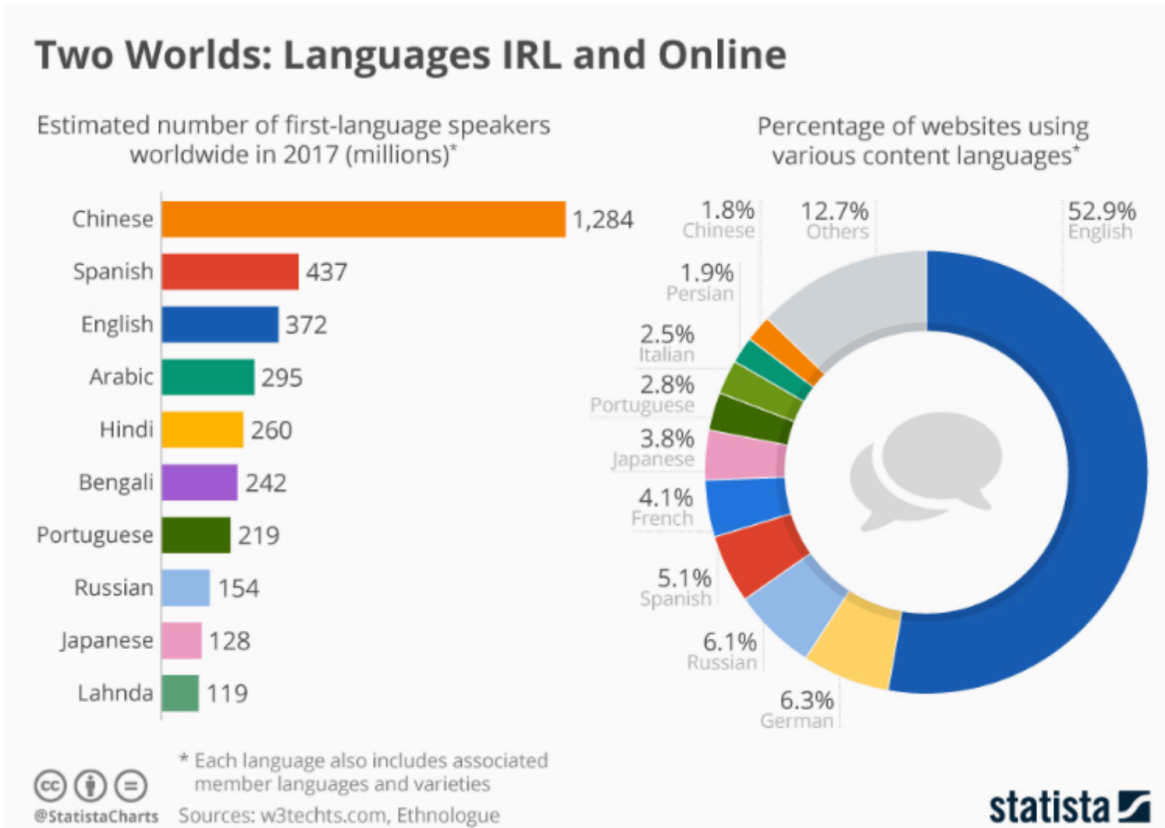


Image: Statista

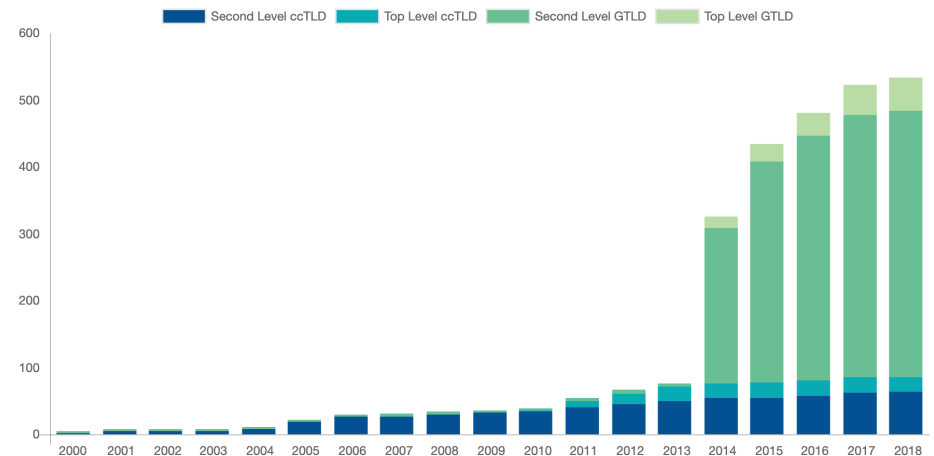
IDN Deployment

- IETF released guidelines for IDN and EAI
- More than 530 TLDs were offering IDNs (at top and second level) by December 2018
- At the end of 2018, there were 9 million IDNs, comprise 2.5% of the world's domains

IDN second level		ASCII top-level domain (TLD)
human readable (UTF8):	ท่องเที่ยว.th	Thai script domain name (hybrid)
machine readable (punycode):	xn--72c5ab8bza6azdwe3cf.th	The same domain name in punycode

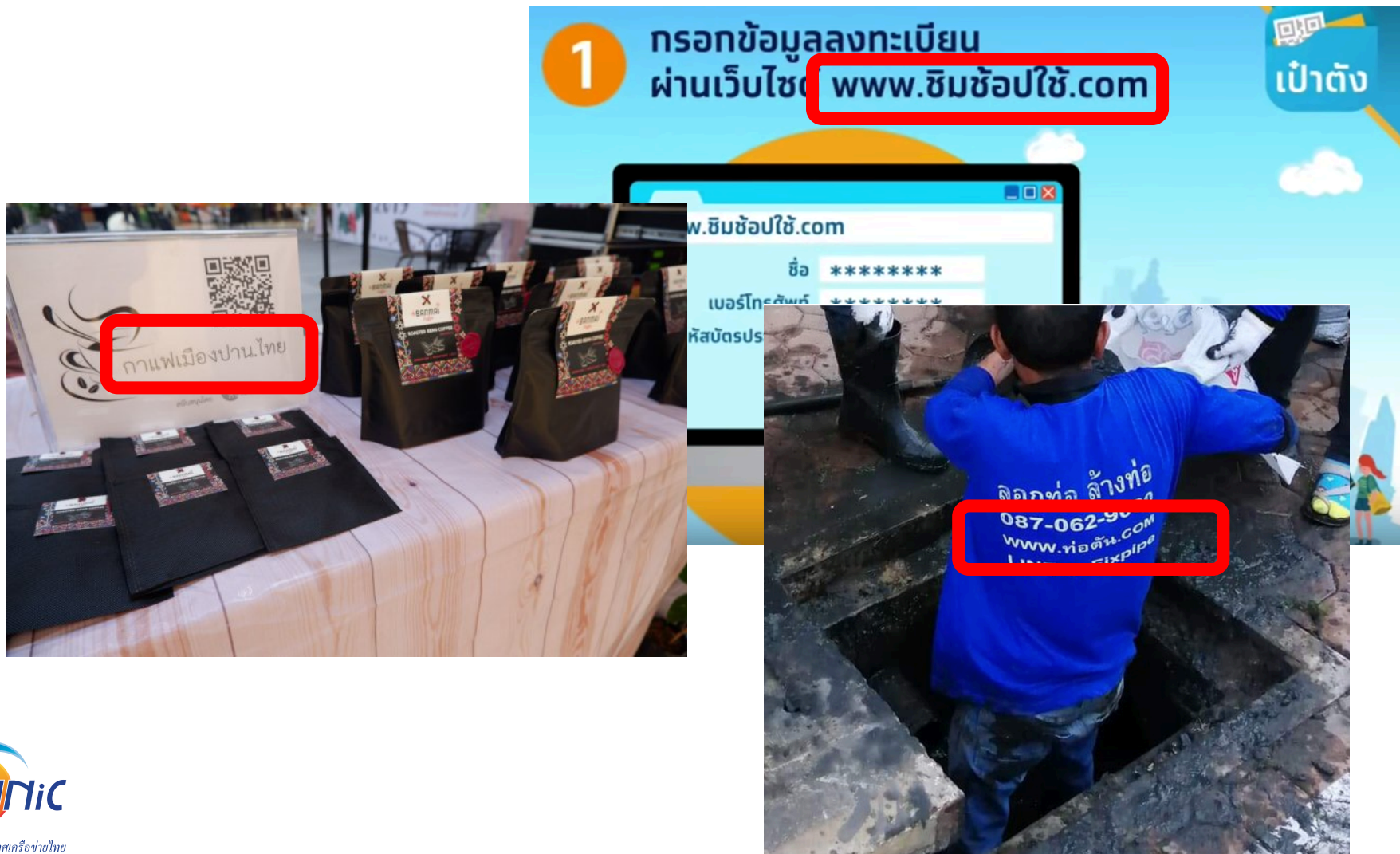
IDN second level		IDN top-level domain (IDN ccTLD)
human readable (UTF8):	รู้จัก.ไทย	Thai script domain name (full IDN)
machine readable (punycode):	xn--12cn4frcvb5f.xn--o3cw4h	The same domain name in punycode

Deployment of IDNs



Cumulative number of IDN launches, both at top and second level, since 2000. Chart shows the impact of ICANN's new gTLD programme (from 2013 on).

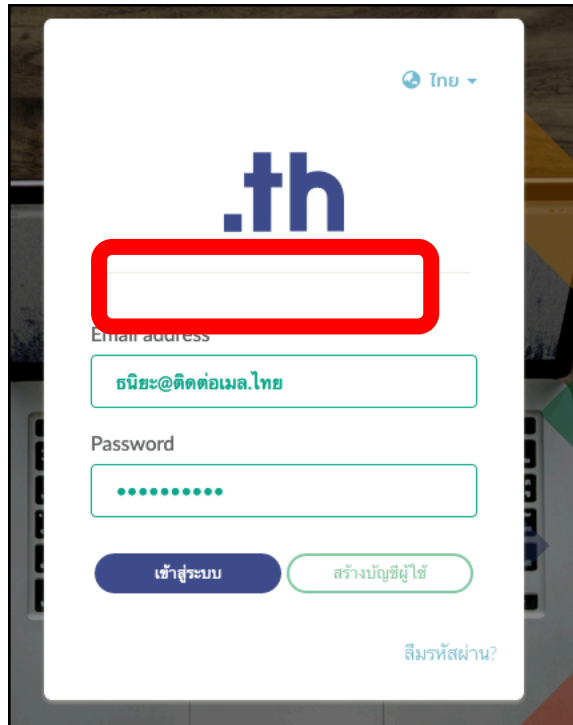
IDN Usages in Thailand



IDN Usages in Taiwan



IDN Usages



ไทย ▼

.th

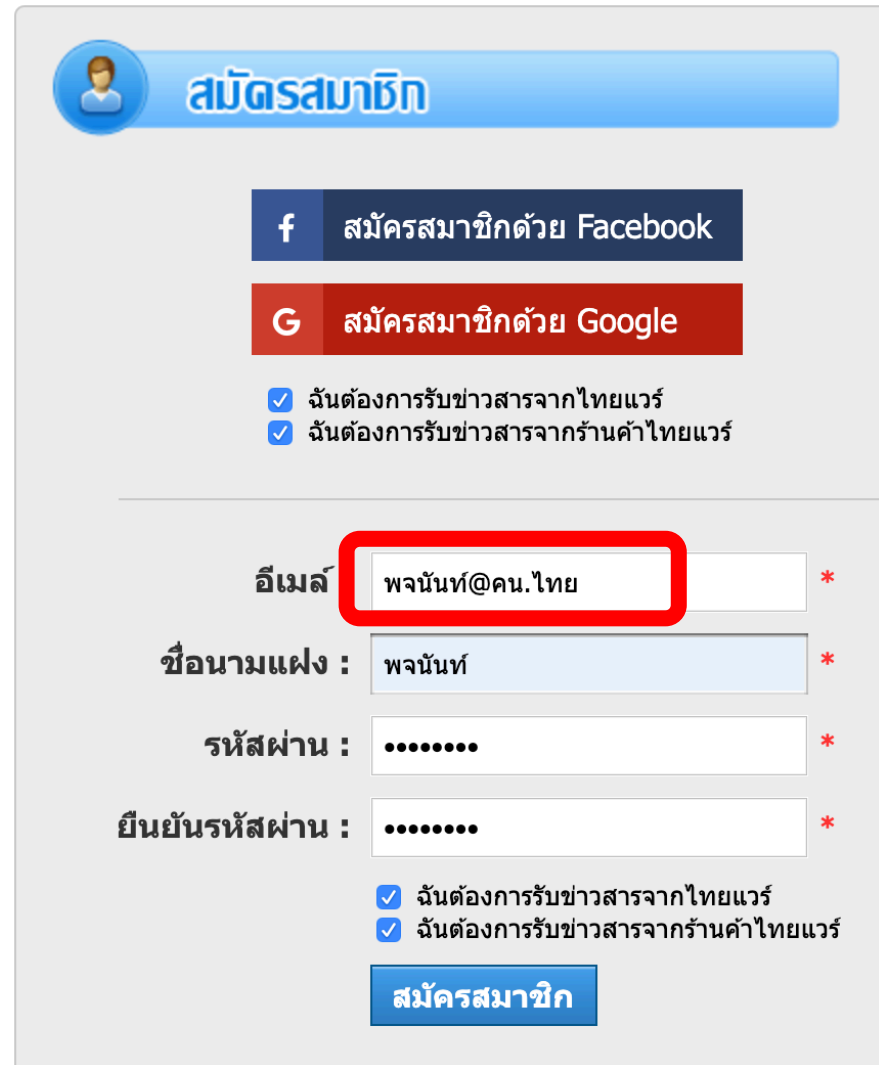
Email address


ธนียะ@ติดต่อเมล.ไทย

Password

.....

[ลืมรหัสผ่าน?](#)



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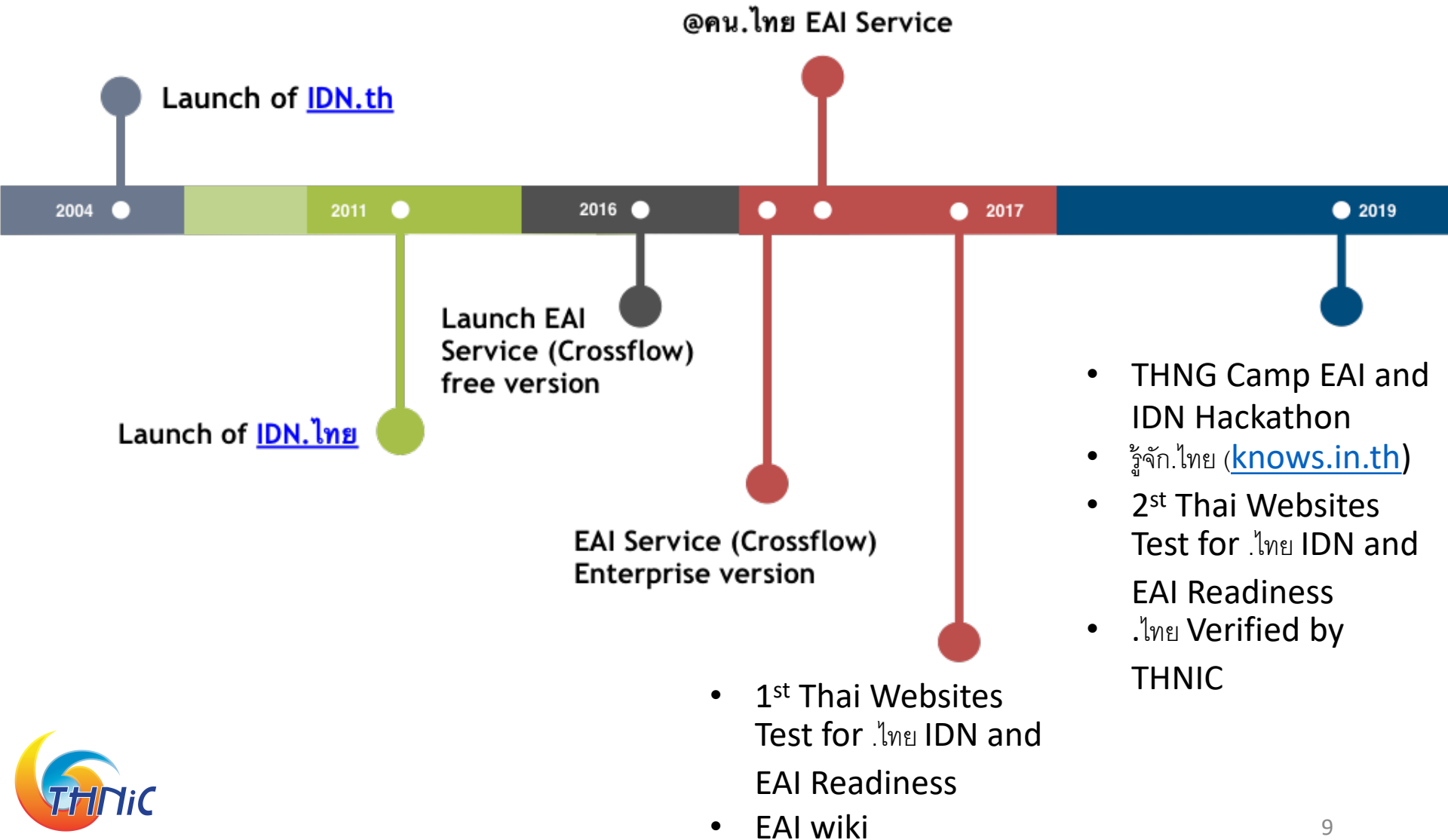
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Problems

- Web addresses cannot be resolved to the intended resource on the website
- Mail systems cannot send mails to expected recipients
- IDNs are difficult to use and do not work in many contexts

THNIC IDN&EAI Timeline



IDN and EAI Updates

- Communicated/created awareness to public, administrators and developers
 - Published a dedicated our website (IDN domain) for IDN and EAI Updates
 - Developed (and support) websites (and booklets) for community
 - Notified IT operators/administrators to modify their systems to be EAI ready
 - Joined local developer communities' meet-ups to let them know about IDN and EAI and benefits for their users
- Provided EAI service and free accounts
- Developed guidelines for configuring a popular adopted email system and used the guidelines in hackathon events
- Tested popular web sites in Thailand in 2017 and 2019 for their EAI readiness

IDN and EAI Updates (cont.)

- Planning and defining local stakeholders, and outcome aimed
- Developing EAI Software Purchasing Guideline in Thai

Universal Acceptance 2019

- Ability to use IDNs across all applications and services associated with domain names
- State of Universal Acceptance
 - major browsers is now quite mature, progress being made in mobile browsers (smartphones, tablets and other, smaller, portable devices)
 - widely deployed email systems have support for EAI
 - social media applications do a good job of displaying non-ASCII scripts and URLs
- “The pace of improvement for Universal Acceptance is glacial. While improvements can be reported, success at the application layer, the interface for human beings, seems a long way off.”

IDN and EAI BoF @ APRICOT 2020

- How to increase the awareness of its significance?
- How to ensure that IDNs and EAI can be used faultlessly?
- Updates of what IDNs and EAI activities have been done

Wednesday, 19 February 2020

Room M1 & M2

Time: 18.00 – 19.00

Please join!