



YOUR TONGUE IS MY FRIEND

IDN email: make domain great again

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DOMAIN MARKET STATE



Growth has stopped:

- Browser behavior
- Social networks
- Market saturation



NEW MARKETS

IDN domains

- TLDs: .РФ, .БЕЛ, .УКР...
- 2nd level: .com, .net, .eu...

New gTLDs

No Devel that's been hatched would let a sale get away just because they couldn't speak the right tongue.

Robert Lynn Asprin «Another fine myth»



.PH: SUCCESS STORY

TCI — registry backend provider

The largest IDN domain

> 750 000 names

Widely used on billboards

No more http: and www



NEXT STEPS: EMAIL ADDRESS INTERNATIONALIZATION

Standards: since 2010

RFCs for email, POP3/IMAP, mailing lists...

Runet statistics:

.RU: SMTPUTF8 on ~5000 MX nodes,
serving ~ 100 000 zones

Source: <https://statdom.ru/tld/ru/report/mxsmtputf8/#52>

TCI experiments:

Proof-of-concept EAI system: @тест-почты.рф



EAI: SHOWSTOPPERS

Commercial reasons: vicious circle

- No supply — no demand — no supply!

Technical reasons: long story

- Many standards based on RFC 822
- New standards **MUST** be written...
- ...and implemented

Legacy:

- Many sites do not recognize EAI



BREAKING THE TECHNICAL OBSTACLES

RFC 8398 «Internationalized Email Addresses in X.509 Certificates»

- Secure email communications for EAI
- Protected/encrypted contents

Implementation: OpenSSL patch

- EAI pretty print
- nameConstraints
- Correctly comparing EAI address
- Patch: <https://cctld.ru/files/books/EAI.pdf>
- OpenSSL PR: <https://github.com/openssl/openssl/pull/9654>



TO BE CONTINUED

Universal Acceptance <https://uasg.tech/>

To achieve Universal Acceptance, Internet applications and systems must treat all TLDs in a consistent manner, including new gTLDs and internationalized TLDs. Specifically, they must accept, validate, store, process and display all domain names.

ICANN activities <https://community.icann.org/display/TUA>

- UA Technology WG
- UA EAI WG
- UA Measurement WG



QUESTIONS?

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