

# Universal Acceptance – Getting ready for the Expansion of the DNS

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28 February 2018



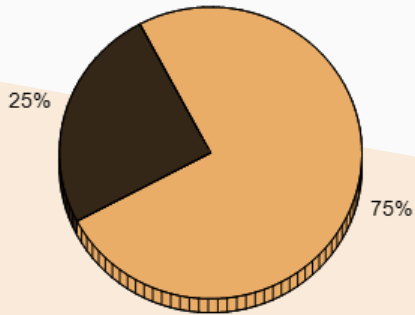
Universal Acceptance

Warm-Up

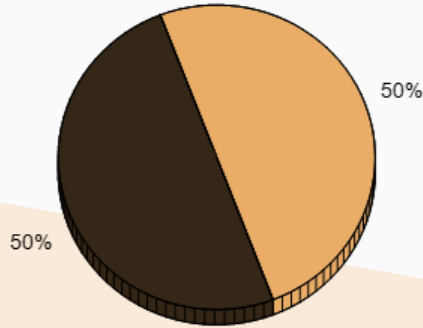


# Warm-up Exercise

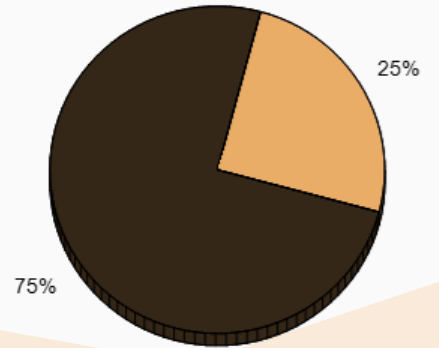
*According to w3techs, which of the following pie charts most closely represents the fraction of websites on the Internet that are primarily English language based content?*



25% English  
75% All other



50% English  
50% All other

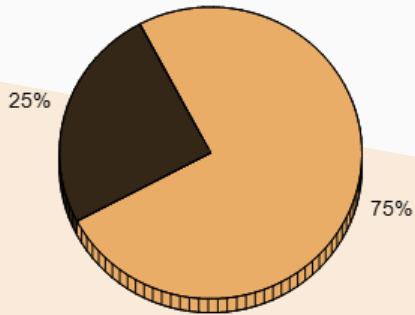


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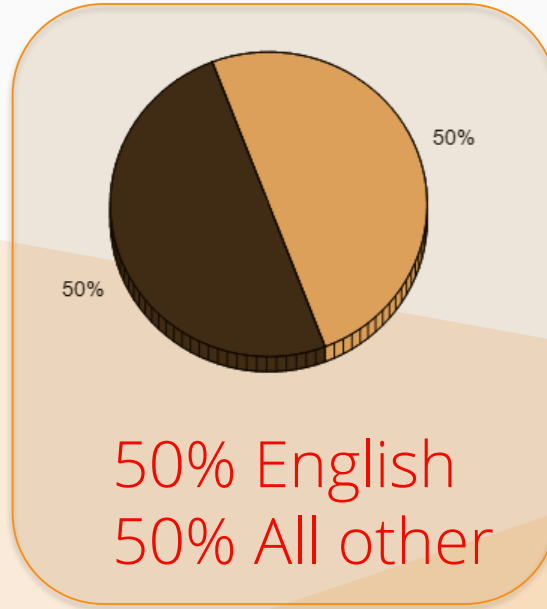
Actual data can be found at [https://w3techs.com/technologies/history\\_overview/content\\_language/ms/y](https://w3techs.com/technologies/history_overview/content_language/ms/y). Data shown is approximate.

# Warm-up Exercise: Solution

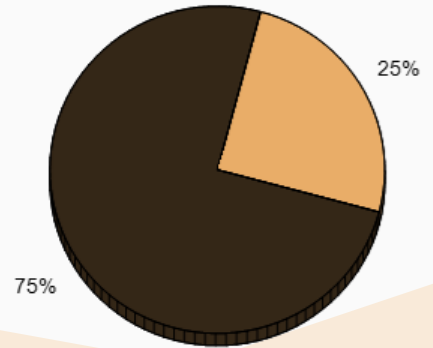
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# Warm-up Exercise

Each of the 3 groups below contain lists of Top Level Domains (TLDs) that are valid (approved and delegated by ICANN), except that each list contains one made-up or invalid TLD. **Which TLD in each group is invalid?**

## Group A

嘉里  
ANALYTICS  
BLOCKBUSTER  
DIAMONDS  
HOTELES  
广东  
MOVISTAR  
இந்தியா  
REALLY  
政务

## Group B

ABC  
مصر  
ATHLETA  
இலங்கை  
CANCERRESEARCH  
CITIC  
新加坡  
ESURANCE  
FAKE  
ไทย

## Group C

GMAIL  
قطر  
JOY  
LIKE  
hwj  
ONYOURSIDE  
OOO  
فلسطين  
SILLY  
SUCKS

# Warm-up Exercise

The 3 invalid TLDs are highlighted below in **red**. There are 1541 valid TLDs (as of January 2<sup>nd</sup>, 2018), and the list is continuing to grow.

## Group A

嘉里  
ANALYTICS  
BLOCKBUSTER  
DIAMONDS  
HOTELES  
广东  
MOVISTAR  
இந்தியா  
**REALLY**  
政务

## Group B

ABC  
مصر  
ATHLETA  
இலங்கை  
CANCERRESEARCH  
CITIC  
新加坡  
ESURANCE  
**FAKE**  
ไทย

## Group C

GMAIL  
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ONYOURSIDE  
OOO  
فلسطين  
**SILLY**  
SUCKS

# Building Blocks: gTLDs

- \* Starting in 2013, ICANN (the organization responsible for the creation and maintenance of TLD assignments) approved the creation of a large number of new TLDs. These new TLDs can represent brands, communities of interest, geographic communities (cities, regions) and more generic concepts. Collectively, all of these new TLDs are known as Generic Top Level Domains (gTLDs).

## Original Seven gTLDs

.com  
.org  
.gov  
.edu  
.mil  
.net  
.int

## Common cc TLDs

.de  
.cn  
.uk  
.nl  
.eu  
.ru  
.tk

## New gTLDs

.top  
.xyz  
.loan  
.club  
.网址  
.信息  
.コム

# Anatomy of an email address

[username@example.com](mailto:username@example.com)

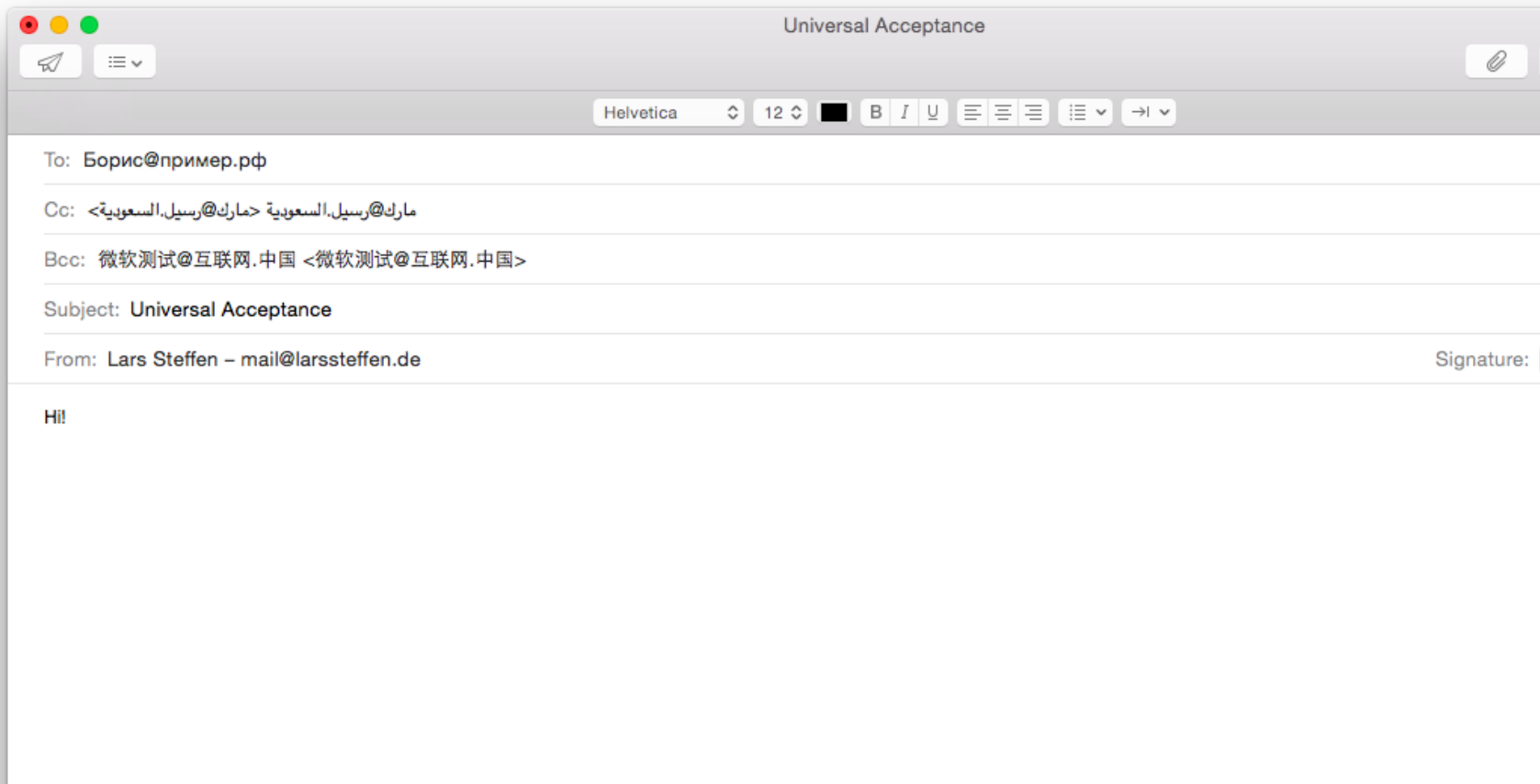
测试5@普遍接受-测试.世界

- \* Username/测试5
  - \* Mailbox name
  - \* Can be in ASCII or Unicode
- \* Second level domain name (example/普遍接受-测试)
  - \* Can be ASCII or Unicode.
  - \* Unicode can be represented as Unicode or Punycode
- \* Top Level Domain name (.com/.世界)
  - \* Can be ASCII or Unicode
  - \* Unicode can be represented as Unicode or Punycode
  - \* Can be 2 to 63 characters long
  - \* Can ONLY be from an authoritative list that is dynamic and has more than 1,000 choices



# The Reality





Universal Acceptance

Helvetica 12 B I U

To: Борис@пример.рф

Сс: <مارك@رسيل.السعودية >مارك@رسيل.السعودية

Всс: 微软测试@互联网.中国 <微软测试@互联网.中国>

Subject: Universal Acceptance

From: Lars Steffen – mail@larssteffen.de

Signature:

Hi!

**Warning**

"Борис@пример.рф" does not appear to be a valid email address. Verify the address and try again.

Cancel Send Anyway

# Definition

*“ Universal Acceptance (UA) ensures that all domain names and email addresses can be used by all Internet-enabled applications, devices and systems. ”*

# Universal Acceptance Steering Group



# Who is involved...



# UASG Activities



Review

Popular Websites, Dev Frameworks, Browsers, OS



Build

Use Cases, Test Environments, EAI Community



Outreach

Live Workshops, Panel Discussions, Presentations



Writing

Knowledge Databases, Whitepapers, Quick Guides

Why should you care?





**Email:**

Your email...

**Password:**

Your password...

LOGIN TO ACCOUNT

天猫tmall.com-上天猫 . x

www.tmall.com

# 天猫 Tmall.com

所有商品分类

国际品牌

优衣库 Adidas GAP 飞利浦 微软  
新百伦 Nike 兰芝 ELLE Kanicare

服装/内衣/配件

女装 男装 内衣 连衣裙 针织衫  
T恤 文胸 睡衣 男T恤 牛仔裤

鞋/箱包

女鞋 男鞋 单鞋 休闲鞋 帆布鞋  
女包 男包 旅行箱 帆布包 撞色包

珠宝首饰/手表眼镜

珠宝 手表 饰品 太阳镜 ZIPPO  
钻石 珍珠 黄金 项链 手镯

化妆品

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- 手机、数码 >
- 电脑、办公 >
- 家居、家具、家装 >

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www.dangdang.com





How to get  
Universal Acceptance ready?





## Universal Acceptance ready

- \* Accept, Support, Use and Show Unicode.
- \* Store Information in UTF-8.
- \* Accept Strings up to 256 characters.
- \* Validate as little as possible.
  - \* Verify TLDs against authoritative table.
  - \* Query domain name against DNS.



## Universal Acceptance ready

- \* When developing app / service, or operating a registry, consider languages supported.
- \* Perform code reviews.
- \* Check code points that were not defined when application / service was created.



## Universal Acceptance ready

- \* Consider mixed-script addresses become more common.
- \* Convert non-Unicode to Unicode before display.
- \* Use Unicode IDNA Compatibility Processing to match user expectations.
- \* End user should see “everyone.*みんな*” vs. “everyone.xn--q9jyb4c.”

Encountering UA issues?

[uasg.tech/global-support-centre](https://uasg.tech/global-support-centre)





# Further information

- \* Visit [uasg.tech](https://uasg.tech)
- \* Visit [bit.ly/icannUA](https://bit.ly/icannUA)
- \* Visit [github.com/icann](https://github.com/icann)



- \* Get your Universal Acceptance Quick Guide!

Thank you!

