

## Summer, 2019 Member Newsletter

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# Our 16th National Web Contest

We believe 2019 saw our most successful web design and development competition ever. We held this in Louisville, KY, during the last week of June. Our competition is one of 103 individual competitions at SkillsUSA Nationals. Competitors must win first place in their respective states for the opportunity to compete nationally. We also choose one winner from these competitions to represent the US at WorldSkills. That competition is held every two years (and the next will happen this August in Kazan, Russia). Winners of this years competitions can be found at: <https://webprofessionals.site/WebContest-19Winners>.

We are so appreciative of the massive efforts by so many members of Web Professionals to make this competition a reality. We have our team on site for almost an entire week. They conduct the interviews of competitors. These mimic real interviews as many of the individuals conducting the interviews hire web professionals as part of their daily jobs. They also review the process each team follows as they provide solutions to the business problems posed in our competition work orders. They also make certain the server and network environment is running smoothly and that all teams can access their individual server, cloud storage, and editor. This can be a particular challenge when some teams bring school computers which have been so locked down one cannot even access the Windows Control Panel. We could not do it without you.



Our onsite team (from left to right) – Grant, Steve, Mark, Jonathan, Jeff, James, and David.

When we started this competition in 2004, we provided each team a paper version of contest materials and a USB drive with assets. They were given a work order and asked to design a web site for a not for profit. We now provide a local network and server environment. Each team is sandboxed in their own Docker container with a web server and local cloud storage along with a code editor (they can choose to use it or to upload their work). Teams were asked to read an API which we provided via the server. Each team was asked to provide solutions to several challenges. We also evaluated their development process and conducted a formal job interview.

We run two separate competitions. Wednesday is for high school students. We had 52 individuals competing this year. Our Thursday competition is for college students. We had 20 individuals competing this year. When the competition ends each day, we transfer all the work by each team to a secure location on one of our web servers. Judges from other states can then review the work of each team. Our judges are practicing web professionals and we have more than one judge review the work of each team. Each judge focuses on a specific area (such as accessibility). All scores are collected and finalized by the following morning. We could not achieve all this without our off site judges. If you are reading this and would like to help (or would like more information), please contact us. We can always use more judges. Judges this year included: Shari, Reuben, Alan, Patrick, and Larry. If you are interested in overall comments from our judges, we provided a summary for competitors to review on [our separate Web Design Contest site](#).

Before the competition begins, we offer training to competitors and their advisors the day before (Tuesday). This is our opportunity to make certain everyone has a solid understanding of current industry best practices as they relate to web design and development. It also gives competitors and their advisors the opportunity to ask questions and develop a better understanding of what the competition is all about. In the photo below, Jonathan is discussing process best practices.

We had a number of advisors and teachers contact us asking how they can improve their programs. To us, this means we are impacting what is being taught (both high school and college).





Jonathan Worent provided an overview of process best practices to competitors and their advisors.

We also had our WorldSkills Web Design and Development competitor, Matt Vreman, speak to competitors and their advisors before the competition began. He discussed his background (he won gold at one of our prior competitions) and reviewed his progress as he prepares to compete in Kazan, Russia in August, 2019. I will be accompanying him as his advisor in that competition (each country is allowed to bring in one expert to help their competitor). There will be roughly 50 countries competing in Russia in web design and development.



Matthew Vreman (WorldSkills competitor in web design and development) answering questions.

This was our 16th year running a national web design and development competition. A lot has changed in our industry over that time. We like to think that our competition has kept pace with changes in our industry. Over these years, we have had the chance to speak with roughly 2,000 competitors and their advisors/ teachers. We believe that we are making a difference in that competitors and their teachers see what current best practices are and many have adjusted their curriculum accordingly. We see these trends continuing based on the

feedback received this year (particularly from advisors). We could not do this without the help of our members; they serve in many roles (including judges and on site team). Members also provide the funding through their annual membership dues to help us achieve our goal of insuring that the next generation of web professionals is following Industry best practices. Thank you so much.

## Our Advisory Board

As with our web contest, we rely on insights from many individuals to help us better understand what matters to practicing and aspiring web professionals. We thought it might be helpful to introduce some of our advisory board to all members. We asked each to provide a short bio so you can learn more about them. We will introduce more in coming newsletters.

### Christopher Schmitt

(Accessibility and Training Specialist)



Christopher Schmitt is an award-winning web designer who has been working in the medium for over twenty years. He has a Masters in Communication for Interactive and New Communication Technologies, and is the author of many books including CSS Cookbook and Designing Web and Mobile Graphics. Christopher is always looking for ways to help educate and empower people about web publishing and technology culture.

### Deborah Edwards-Onoro

Deborah Edwards-Onoro is a front-end web developer and user experience professional with expertise in usability, accessibility, and Word-Press. She provides website consulting and services to businesses, nonprofit organizations, and higher education institutions.



She worked four years on the web services team at a community college, designing web pages, conducting usability studies, and creating accessibility guidelines.

As organizer of the Metro Detroit WordPress, Refresh Detroit, and West Metro Detroit WordPress meetup groups, she plans monthly events and promotes news about web design and development.

When she's not on her computer, you can find her taking photos, birdwatching, or bicycling.

Members we will introduce in a future newsletter include: **Aaron Gustafson**, **Ruchi Pareek**, and **David Jackson**.

## Universal Acceptance Group

Editor's note: We provide the following three articles by the Universal Acceptance Group.

Universal Acceptance is a foundational requirement for a truly multilingual Internet, one in which users around the world can navigate entirely in local languages. It is also the key to unlocking the potential of new generic top-level domains (gTLDs) to foster competition, consumer choice and innovation in the domain name industry. 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.

The Universal Acceptance Steering Group is a community-based team working to share this vision for the Internet of the future with those who construct this space: coders. The group's primary objective is to help software developers and website owners understand how to update their systems to keep pace with an evolving domain name system (DNS).

## Making New Internet Domains Work for Everyone

by

**By Don Hollander**

Secretary General

[Universal Acceptance Steering Group](#)

Since 2006 the Domain Name System (DNS) has expanded dramatically, not only fueling competition, choice and innovation, but truly enabling a multi-lingual Internet. There are now more than a 1,500 top-level domains (TLDs), many of which are longer than the traditional two- and three-character (e.g. .com, .edu, .nz, and .org) or are in non-ASCII based scripts – such as Arabic, Cyrillic, Devanagari and Thai.

The expansion allows people to claim a domain name that best reflects their sense of identity. While this expansion is critical in bringing the next billion people online and growing the global Internet economy, the incorporation of these new domains across the global Internet is not an entirely automatic process. CIOs, web administrators, application developers and others have an important role to play in making sure their applications are compatible with the evolved Internet infrastructure. That's why we're reaching out to make sure you know about this change.

### The issue at hand

Many organizations and business have not updated their systems to accommodate the new domains or, in other words, become Universal Acceptance (UA)-ready. As a result, many applications and systems are unable to accept, validate, store, process or display all domain names. This causes problems for organizations and headaches for users because if the applications do not recognize or appropriately process the new domain names or email addresses that use these extensions, it will result in lost customers and a poor user experience.

### Resources available to assist you

To address these issues and provide support, stakeholders and industry leaders such as Apple, GoDad-

dy, Google, ICANN, Microsoft and Verisign, created the Universal Acceptance Steering Group (UASG). The UASG exists to help organizations ensure their systems are UA-ready and able to accept all domain names and email addresses in any valid script.

The UASG has developed several helpful guides and resources which are available at <https://uasg.tech/information/>. Of particular note is the [Quick Guide to Universal Acceptance \(UASG005\)](#). We encourage you to visit our website and view these useful materials, and to get involved with the UASG (you can join the mailing list at <https://uasg.tech/subscribe>) so we can work together to fully incorporate these new domains for the benefit of the next generation of Internet users.

## Is Your Email Ready for the Global Market?

by  
**By Don Hollander**  
Secretary General  
[Universal Acceptance Steering Group](#)

Email connects the globe with a click. And it is critical for more than just sending messages; we use email addresses to log in to social networks, identify ourselves for government services, and as the spare key for our online identity. But it's not as universal as you might imagine.

Until recently, email only used non-accented Latin characters (A – Z, 0-9) for addresses, even for languages such as Russian, Hindi, Thai or Chinese. Only a minority of the world's population use a Latin alphabet with no accents in their daily lives, and the next billion Internet users are even less likely to do so. To make email for a global audience, people need to be able to write their email address in their native script.

The good news is that's now possible. Email Address Internationalization (EAI) allows email addresses to use all kinds of scripts: `günter@büncher.berlin` is now a possible email address. However, email software and services need to make specific updates to support them.

Specifically, they must be able to support IDN (internationalised Domain Names) in the domain name, they must be able to support non-ascii characters in the mailbox name, and they must advertise this fact to other email software by announcing SMTPUTF8. There is a growing awareness of the issue and concrete progress. Examples include:

- [Coremail](#), [XgenPlus](#), [Throughwave](#) and others can host EAI addresses.
- Latest versions of [PostFix](#) and [Exim](#) (widely used Mail Transfer Agents) are EAI Ready.
- Android Email Client (default), BharatSync Communicator (Android), Apple Mail (IOS), Microsoft Outlook 2016 for Windows and others are also EAI Ready.
- Gmail, and Office365 and others can send to and receive from EAI addresses.
- [Mailman](#), a popular Open Source mailing list manager, is also EAI Ready.

But more needs to be done. Popular global and regional service providers are, or will be, working on providing full support for EAI. In India DATAMAIL offer free EAI mailboxes in 8 Indian and 2 International languages, and in Russia почта.ру offers free Cyrillic mailboxes.

The Universal Acceptance Steering Group ([www.uasg.tech](http://www.uasg.tech)) has resources to help companies and organizations in this process, including the "[Quick Guide to Email Address Internationalization \(EAI\)](#)" - practical advice for email software and service providers. There is also a full catalogue of relevant technical documents such as the [SMTP Extension for Internationalized Email](#) and [IMAP Support for UTF-8](#), on the ietf.org website.

1. If your application uses email addresses, ensure it supports UTF-8 characters in the domain name and the mailbox name.
2. Check if your own mail system is EAI ready. If you're not sure, ask your provider.
3. Test your systems. UASG offers a [set of live domains and addresses for testing](#).

With half the world [expected](#) to use email in 2020, the time to get EAI ready is now! Universal Acceptance is the simple concept that all domain names and all email addresses work across all applications.



# Programming Language Hacks

by  
**By Don Hollander**  
Secretary General  
[Universal Acceptance Steering Group](#)

**Universal Acceptance** is the simple concept that all domain names and all email addresses work across all applications.

A recent Universal Acceptance Steering Group (UASG) (<http://www.uasg.tech>) study found that many users were being denied access to applications because they lacked a simple fix.

Top-level domains (TLDs) and email addresses have evolved markedly since 2010, when non-ASCII characters were first introduced. Hundreds of these new style TLD names, including TLDs longer than three characters, have been added into the root zone. In 2012 non-ASCII characters became available in the mailbox portion of email addresses.

Examples [taken from the UASG's working test cases](#) include:

Style of Address	Example Test Case
<a href="#">ascii@ascii.newshort</a>	<a href="#">info1@ua-test.link</a>
<a href="#">ascii@ascii.newlong</a>	<a href="#">info2@ua-test.technology</a>
<a href="#">ascii@idn.ascii</a>	<a href="#">info3@普遍接受-测试.top</a>
<a href="#">ascii@ascii.idn</a>	<a href="#">info4@ua-test.世界</a>
<a href="#">Unicode@ascii.ascii</a>	<a href="#">测试1@ua-test.link</a>
<a href="#">Unicode@idn.idn</a>	<a href="#">测试5@普遍接受-测试.世界</a>
<a href="#">Arabic.arabic@arabic</a>	<a href="#">دون@رسيل.السعودية</a>

In a [recent study of 1000 popular websites](#), too few accepted the full range of email addresses to be used as unique identifiers. We found no consistency in the programming of the Regular Expressions used to validate email addresses and very little use of competent server-side libraries for validation, contributing to these poor results.

The UASG was established in 2015 to raise awareness

of issues like this and to facilitate resolution. It is an initiative of the Internet community and is supported by ICANN. The UASG has developed a [range of documentation](#) and resources for becoming UA-ready, for both management and developers.

Developers must update their code to accommodate this growing number of domain names and email addresses. Here is some guidance for modernizing your applications:

## Input

Data fields that accept domain names or email addresses must accept ASCII and non-ASCII characters. Many of the next billion Internet users to come online (and existing users that prefer addresses that better reflect their sense of identity) require text that doesn't use only ASCII. UTF-8 is the key here. This will affect input, storage and output of data from keyboards, databases and other data sources. Most modern software components are capable of supporting this. They just need to be configured correctly.

## Validation

The easiest way to deal with this is to use a simple syntactic<sup>1</sup> validation of the email address in the client side and more extensive validation through server-side libraries. There are other ways of making sure the data entered is what the user meant, such as requiring entry of the field twice and doing a compare or sending an email to verify receipt. Using extensive and complicated Regular Expressions are often difficult to debug and may not cater to the now dynamic set of top-level domain names.

If you need to validate further, use a DNS lookup – that's the most certain. Or if you're going to use a local table of TLDs, make sure that it's from an authoritative source<sup>2</sup> and that your local table is updated at least monthly.

## Storage

The easiest way to deal with storage is to support Unicode. This ensures that the data is reproducible exactly as received. But for applications or systems that can't, there is an algorithm that allows non-ASCII domain names (known as U-labels) to be represent-

ed in ASCII (known as A-labels.) No similar facility exists for mailbox names.

## Processing

When processing or sorting, it's important that equivalent names are treated as equivalent. Examples of equivalent but different representations include Unicode vs. Punycode, Unicode Normalization and the use of different native scripts. Treating equivalences will require some policies for the application or indeed the organization.

## Display

People-facing applications should be capable of displaying TLDs and email addresses in native scripts with appropriate fonts.

<sup>1</sup> Make sure there's one and only one '@', no consecutive dots, and the entire domain length is no more than 255 characters.

<sup>2</sup> There are a few options for the authoritative list of TLDs. The first option is the DNS root zone itself. It is DNSSEC-signed, so the list is properly authenticated. You can obtain the root zone from any of the following links:

- <http://www.internic.net/domain/root.zone>
- <http://www.dns.icann.org/services/authoritative-dns/index.html>
- <http://data.iana.org/TLD/tlds-alpha-by-domain.txt>

## Validation Libraries

Programming language libraries, particularly open source programming language libraries, are creating or correcting validation routines, so becoming UA-ready may be as simple as re-compiling the code using the latest version of the library. The UASG is encouraging remediation work in many libraries. When systems are UA-ready, they will work with the continuously expanding domain name space. It also sets businesses up for future opportunities and success by supporting their customers using their customers' chosen identities. It's time to get applications up to scratch.

For more information on this topic or about the UASG, or to contact us, please visit [www.uasg.tech](http://www.uasg.tech).

# Web Professionals Advocacy Efforts

We thought members might like to know about some of our recent advocacy efforts.

## Contract for the Web

Sir Tim Berners-Lee has asked governments, companies, and citizens to commit to the following principles to "protect the open web as a public good and a basic right for everyone." Web Professionals has formally committed to these principles. When you visit <https://contractfortheweb.org/>, scroll down and you will see our organization listed. These principles are listed below (copied from the contract for the web site).

### "Governments will

- Ensure everyone can connect to the internet  
So that anyone, no matter who they are or where they live, can participate actively online.
- Keep all of the internet available, all of the time  
So that no one is denied their right to full internet access.
- Respect people's fundamental right to privacy  
So everyone can use the internet freely, safely and without fear.

### Companies will

- Make the internet affordable and accessible to everyone  
So that no one is excluded from using and shaping the web.
- Respect consumers' privacy and personal data  
So people are in control of their lives online.
- Develop technologies that support the best in humanity and challenge the worst

So the web really is a public good that puts people first.

Citizens will

- Be creators and collaborators on the web

So the web has rich and relevant content for everyone.

- Build strong communities that respect civil discourse and human dignity

So that everyone feels safe and welcome online.

- Fight for the web

So the web remains open and a global public resource for people everywhere, now and in the future."

### **Proposed changes to ICANN registry agreements for .org and .biz domains**

ICANN proposed unlimited fee increases for .org and .biz domains (they are presently capped at 10% per year). We thought this was a particularly bad idea (and similar to one proposed in 2006). Web Professionals formally submitted our opposition to these proposed increases. We were one of over 3,200 submitted comments. At the time of this writing, it does not appear that a formal decision has been made. If you would like to review this in more detail, we recommend the following links:

<https://www.icann.org/public-comments/org-renewal-2019-03-18-en>  
<https://www.icann.org/public-comments/biz-renewal-2019-04-03-en>

## **Opportunity for our members**

Web Professionals is considering offering a new service for small to medium businesses – specifically an audit/ review of their website. This would entail a review of a business website with an emphasis on performance, search engine rank, and accessibility. There are certainly tools which exist to address all these aspects (and more). However, most of the results are not in plain English. We propose to offer

this service with analysis and recommended improvements in language a business will understand. We plan to offer some pilot projects before the end of this year. Revenue earned from these activities would be directly shared with members who conducted the bulk of the review. If you would like to participate as a reviewer, please contact our Executive Director (Mark@WebProfessionals.org).

## **Web Professionals overview**

[Webprofessionals.org](http://Webprofessionals.org) aka World Organization of Webmasters is an all volunteer and non-profit professional association dedicated to the support of individuals and organizations that create, manage or market Web sites. The organization provides education as well as certification, technical, employment and member advantage services to thousands of aspiring and practicing Web professionals worldwide. We are always on the lookout for members who are willing to take a leadership role in our organization. We can't do all our work without you.

For more information, visit <http://www.WebProfessionals.org>.

### **Social media**

You can find us on:

**Facebook** - <https://www.facebook.com/webprofessionals>

**Slack** - <https://4WebProfessionals.slack.com>

**Twitter** - [@WebProMinute](https://twitter.com/WebProMinute)

**Pinterest** - <https://www.pinterest.com/webprofessionals/>

### **Colophon**

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