

EAI Technical Education and Awareness Directed at Developer Community Websites

1 December 2022

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About ThinkTrans

ThinkTrans, a techno-linguistic company, works in the domain of natural languages and the allied technical and consultancy services. ThinkTrans has a pool of around 120 language experts from all the 22 scheduled languages of India. They work on projects from various national bodies, international organizations, private entities as well as industry associations. ThinkTrans specializes in consultancy and development services related to Internationalized Domain Names (IDNs) and a multilingual Internet.



Executive Summary

This report is aimed at detailing the actions taken and final summary of the <u>Universal</u> <u>Acceptance (UA) Email Address Internationalization (EAI) Technical Education and</u> <u>Awareness to the Developer Community via Q&A Websites project</u> under the Universal Acceptance Steering Group (UASG) initiative. As the name suggests, the project was aimed at engaging in various user forums from the point of view of UA, IDNs, and internationalized email.

The report is divided into four sections:

- Prior Analysis
- Execution Phase Analysis
- Action Taken
- Call for Action

As a part of the execution of the project, some developer community forums were preidentified and they were planned to be engaged with in the execution phase. The initial part of the report gives the analysis of those forums and the feasibility of engaging them vis-à-vis the stated objectives of the project. As a part of that analysis, it was determined that some of the forums were not suitable and dropped from the analysis, while new ones were added in their place. The execution phase analysis section provides details on the experience of each of the forums, the nature of engagements, and additional details. The Action Taken section gives concrete details about the engagements on each of the forums. The Call for Action section details the systematic steps that the UA community can take in order to maximize the effectiveness of engaging with these forums for furthering the UA cause. Although not part of the project deliverables, it felt necessary to document the peculiar discourse patterns on these forums, which are captured in Appendix A.



Introduction

This report details the execution of the UA Email Address Internationalization (EAI) Technical Education and Awareness to the Developer Community via Q&A Websites project constituted under the UASG initiative. It captures analysis of the developer forums, execution details, learnings captures, and subsequent actions required by the UA community for maximizing outreach to developer communities.

Prior Analysis

At the beginning of the project, ThinkTrans analysed some of the most popular developer forums from the point of view of the current state of Q&A discourse in relation topics related to UA, IDNs, and internationalized emails. The analyzed developer forums were:

- 1. StackOverflow : https://stackoverflow.com/
- 2. Serverfault : https://serverfault.com/
- 3. GitHub: http://github.com
- 4. Hashnode: http://hashnode.com
- 5. Developer Circles http://developers.facebook.com/developercircles
- 6. FreeCodeCamp http://freecodecamp.org

The following keywords were identified to analyse the discussion trends on these developer forums.

IDN	Domain	Validation
Email	idna	Unicode

The terms UA and EAI were specifically excluded from this analysis as in most of cases, they were fetching results where they meant "User Agent" and "Enterprise Application Integration" respectively, thereby giving misleading results.

Stackoverflow

Stackoverflow is one of the most active and informative developer community forums presently. The sheer volume of questions for each of the keywords underlines the importance of this particular community forum.

Torm	Number of Questions		
Term	As tag	As part of the content	
IDN	111	2546	
Domain	16,365 ¹	5,03,278	
Validation ²	63,149	63,149	
Email	9,87,339	56,586	
IDNA	2272	1	

¹ Gets redirected to the tag [DNS] and the number is indicative of that tag and not the [domain]

² Plain search gets auto-converted to tag search, hence the same values in both the columns



Unicode 1,68,069 23,646

Observations About This Forum

- 1. This forum is related to general purpose programming, hence all the UA-related questions pertaining to all the possible programming languages get asked here.
- 2. The forum explicitly encourages³ the users to "self-answer" a feature that can be utilized for the UA cause.
- 3. This platform generally restricts the discussions on this forum as "Q&A" format and advises⁴ users not to ask subjective questions.

Serverfault

Serverfault is specifically meant to deal with Q&A regarding the configuration, installation, and maintenance-related questions about production servers, in particular. Hence the general IDN validation-related questions are expected to be discouraged, which results in fewer questions on this particular forum. However, it was expected that email server configuration-related questions would be higher.

Term	Number of Questions		
Term	As tag	As part of the content	
IDN	14	140	
Domain⁵	2606	2606	
Validation	0	4809	
Email⁵	6349	6349	
IDNA	0	20	
Unicode	0	593	

Observations About This Forum

- 1. As expected, the number of questions about email configuration were higher on this forum than any other question category. Deeper analysis of this particular forum can help to single out EAI-related questions.
- 2. The forum explicitly encourages⁶ the users to "self-answer" a feature that can be utilized for the UA cause.
- 3. This platform generally restricts discussions on this forum as Q&A format and advises⁷ users not to ask subjective questions.

GitHub

GitHub is the largest source code hosting platform presently. Along with hosting, it provides distributed version control and source code management. There is a particular feature for each of the GitHub projects that the platform provides named "Discussions." This feature is aimed at enabling collaborators on a particular project to discuss some of the bugs/features/collaboration-methodologies about the project they are working on. This

³ http://blog.stackoverflow.com/2011/07/its-ok-to-ask-and-answer-your-own-questions/

⁴ https://stackoverflow.com/help/dont-ask

⁵ Probably because the platform auto-tagged all the questions with the term "domain" in the content as tag

⁶ https://serverfault.com/helpcenter/self-answer

⁷ https://serverfault.com/help/dont-ask



functionality was mainly in a Beta stage for most of the time of its existence. However, on 17 August 2021, GitHub systematically rolled out the "GitHub Discussions" feature as part of the platform. The following statistics are from that particular aspect of the GitHub search.

Term	Number of Questions		
Term	As tag	As part of the content	
IDN	-	51	
Domain	-	7000	
Validation	-	4000	
Email	-	26,000	
IDNA	-	158	
Unicode	-	866	

Observations About This Forum

- 1. GitHub explicitly allows two modes of discourse:
 - a. Open ended discussions
 - i. Great way to get some ideas disseminated within the community and to come up with solutions, one such idea being the Public Suffix List.
 - b. Question and Answer
- 2. The relatively high search volume for the keyword "IDNA" shows that this platform is oriented towards advanced level discussions as most of the people taking part in discussions are contributors to active projects.

Hashnode

Hashnode is a free developer blogging platform that allows a user to publish articles on their own domain and helps them stay connected with the global developer community. Since there are no Q&A or discussion features available on this platform, the keyword-based analysis was not performed.

Hashnode is typically utilized by creating a blog on the platform and linking it to a user's personal domain. However, since the UASG already has a blog of its own, this might prove to be counter-productive.

Developer Circles by Facebook (A Facebook for Developers Program)

As per the Facebook Developer Circles <u>website</u>: "Members receive coaching from technology experts, collaborate with like-minded peers, and take part in a range of building initiatives. Each Developer Circle is managed by a developer community leader who hosts local events, supports an online Facebook Group and shares the latest news **on Facebook products**."

Since the UASG already has many similar programs like UA Local Initiatives and UA Ambassadors, it would be advisable if they are linked with these "local circles."

freeCodeCamp

This platform operates in two modes:

- 1. Learning platform: free online learning platform that hosts various courses on a varied set of topics related to computer programming.
- Community forum built around certain specific tags: in this mode, there are some fixed tags provided by the platform, some of which are relevant to the UASG's work:
 a. JavaScript

- b. Python
- c. HTML-CSS
- d. General (this includes anything and everything that does not fit any fixed tags)

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Observations About the Platform

- 1. For the learning platform, ICANN could provide the "Learn How You Can Help Build a More Digitally Inclusive Internet"⁸ course (and similar future courses) introduced through the ICANN Learn platform, on this platform as well for wider reach.
- 2. freeCodeCamp also has a unique feature that lets users solve "Challenges" as a way of learning. It could not be definitively ascertained if the users of the platform can design challenges for other users. However, ThinkTrans has initiated discussions with the platform administrators to get more clarity on the issue.
- freeCodeCamp is otherwise primarily aimed at novice users who are mainly into learning basics. The keyword search in the forum did not yield any topics or discussions that showed direct relevance to the UASG cause. The term "Unicode" did bring out 50+ discussions, however, most of them pertained to the basics of Unicode.

Execution Phase Analysis

Once the project commenced, the said developer forums were scrutinized in detail from the point of view of their applicability of being useful in terms of their outreach and the nature of intended interactions by virtue of the community they nurture.

The following is analysis of the exercise.

1. StackOverflow : https://stackoverflow.com/:

This is the most relevant forum as it has one of the largest and most vibrant developer community.

2. Serverfault : https://serverfault.com/:

Most the questions on this forum are related to network administration as opposed to programming per se. However, there are questions on this forum that are at times relevant to email server configuration. This forum is relevant to the UA project.

3. GitHub: <u>http://github.com</u>:

As of mid-2020, GitHub did not have a well designated Q&A platform. However, it did launch the "GitHub Discussions" feature where users can ask questions to the developers of a particular project. This feature needs to be turned on by the administrator of the project in order for users to be able to use it. From the project administrator's side, most of their internal discussions already take place via the tracking/commenting mechanism, which means many have not turned this feature on. However, it is recommended that we keep tracking this forum as it is one of the most relevant and impactful to the UA cause.

⁸ https://uasg.tech/2021/08/learn-how-you-can-help-build-a-more-digitally-inclusive-internet/



4. Hashnode: http://hashnode.com:

Hashnode is more of a blogging platform than a Q&A forum. It can be used by the UASG to write blogs on the topic of UA for which answers can be linked. However, this does not have a Q&A format interaction.

5. Developer Circles - http://developers.facebook.com/developercircles:

Developer Circles is more of a regional, physical activity and outreach is driven by Facebook rather than a discussion/Q&A forum. In addition, their mandate is to discuss things more related to Facebook plugins/widgets. It's recommended to reconsider inclusion of this particular forum from the analysis.

6. freeCodeCamp - http://freecodecamp.org:

freeCodeCamp is especially oriented towards those who are learning to code. Most of the questions on this forum are very basic and not oriented towards production setup. Though it might seem lucrative to engage with them at the early stage from a UASG awareness point of view, we do not think outreach on this forum will find much traction. It's recommended that inclusion of this platform is reconsidered.

In addition, there are two forums which could be more relevant to the UASG's efforts:

1. CodeProject - https://www.codeproject.com/

CodeProject has a vibrant community and supports article hosting, Q&A, and discussion formats. Meaningful impact can be made on this platform.

2. Various programming-related subreddits:

Reddit is another active community that can be considered. An initial scan of the forum did not bring up many questions pertaining to IDN/email validations, however, traction can be made if we ask questions in the right way to invoke good discussions. It was recommend that this platform be included as well.

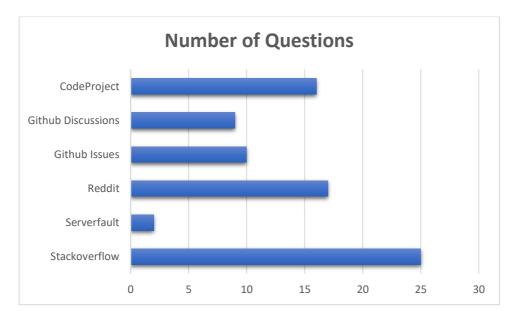
Ultimately, the following forums were considered for interaction with web developers on topics related to UA:

- 1. StackOverflow : <u>https://stackoverflow.com/</u>
- 2. Serverfault : <u>https://serverfault.com/</u>
- 3. GitHub: http://github.com
- 4. Hashnode: <u>http://hashnode.com</u> (For blogs)
- 5. CodeProject https://www.codeproject.com/
- 6. Various programming related subreddits https://reddit.com



Action Taken

Deliverable 1: Engaging with the Developer Community through Questions and Answers



Below is a summary list of the questions and answers that the forums engaged with.

Sr. No.	Question	Forum
1.	How to use IDN domain with swedish åäö when sharing on	Stackoverflow
	Facebook?	
2.	Example URIs for unit testing IDN domains	Stackoverflow
3.	Nodejs Detect punycode IDN language	Stackoverflow
4.	What is a regular expression which will match a valid domain name	Stackoverflow
	without a subdomain?	
5.	Validation code for IDN (Domain) with regex (regular expression)	Stackoverflow
6.	IDN (Domain) validation with regular expression	Stackoverflow
7.	Domain Name Regex Including IDN Characters c#	Stackoverflow
8.	non-Latin email address validation	Stackoverflow
9.	How to validate an e-mail address in swift?	Stackoverflow
10.	How to validate an email address in PHP	Stackoverflow
11.	How can I validate an email address using a regular expression?	Stackoverflow
12.	How can I validate an email address in JavaScript?	Stackoverflow
13.	C# code to validate email address	Stackoverflow
14.	How to validate an e-mail address in swift?	Stackoverflow
15.	How to validate an email address in PHP	Stackoverflow
16.	Unicode Ranges of Indian Language Characters	Stackoverflow
17.	Your email validation logic is wrong	Stackoverflow
18.	Email Address Validation: Please Stop	Stackoverflow
19.	It is impossible to validate an email address	Stackoverflow
20.	Properly validating e-mail addresses	Stackoverflow
21.	Case sensitive hostnames	Stackoverflow
22.	.htaccess file, blocking IDN domains	Stackoverflow

23.	Is there a list of Unicode character categories included/excluded in IDNs?	Stackoverflow
24.	Validating email addresses using jQuery and regex	Stackoverflow
25.	Which Unicode characters are allowed in IDN host labels?	Stackoverflow
26.	Your email validation logic is wrong	Reddit
27.	Email Address Validation: Please Stop	Reddit
28.	It is impossible to validate an email address	Reddit
29.	Properly validating e-mail addresses	Reddit
30.	Is my new gTLD causing it to get filtered as spam?	Serverfault
31.	Case sensitive hostnames	Serverfault
32.	I've released uber-small email validator on GitHub	Reddit
33.	validating if an email is REAL	Reddit
34.	How to check if email address is real?	Reddit
35.	Regular expression for email validation with specific requirements	Reddit
36.	Regular Expression standard for email address validation	Reddit
37.	regex to check if a url is valid and allow uppercase and lowercase	Reddit
	letters?	
38.	Regex validation with comma separated email addresses (no spaces)	Reddit
39.	Email regex	Reddit
40.	best way to parse a string of emails with unknown/inconsistent	Reddit
	delimiter?	
41.	Why does this email address Regex work the way it does?	Reddit
42.	Need Help with Validation using Regex	Reddit
43.	Need help with regex -newbie	Reddit
44.	POV: you want to validate an email in perl	Reddit
45.	Unexpected validation behavior	Github Discussions
46.	What is RFC No of the email validator?	Github Discussions
47.	Add predefined regexes.	Github Discussions
48.	Business email validation	Github Discussions
49.	Should invite email input consider the input valid in capital letters too?	Github Discussions
50.	Validating URLs without scheme	Github Discussions
51.	Email validation does not work correctly	Github Discussions
52.	Add an option to e-mail fields to allow internationalized domain names #9698	Github Discussions
53.	Can't add unicode domain #1870	Github Discussions
54.	Email field: Validation regex option #799	Github Issues
55.	Add custom email regex option #2	Github Issues
56.	Regex validation doesn't work #23	Github Issues
57.	[Code Quality] Move Email adress regex to util #1271	Github Issues
57.	Using a comprehensive email validator #8	Github Issues
50. 59.	Email Validation Regex needed Upgrade #19	Github Issues
60.	Please fix your broken email regex! #171	Github Issues
60. 61.		Github Issues
01.	Fix regex validation for email #15	GILLIUD ISSUES

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62.	decide if we want to use this #8	Github Issues
63.	email validation in config panel is too relax #2058	Github Issues

The above questions and answers covered conversations with the following tags:

validation	email	unicode indic		script
devanagari	regex	email- validation	php	ios
swift	idn	c# javascript		html
node.js	node.js web subdomain		punycode	dns
asp.	net ica	inn 🔢	nain- me facel	book

Reason for the Absence of the CodeProject Platform from the Analysis

The CodeProject platform was engaged with as a part of this project execution, however, due to some of the most stringent and guarded ways in which the discourse is controlled on the platform, the interaction was marked as being "site-driving," "bounty-hunting," and "rephunting" (reputation hunter) and the answers marked were removed through the moderation action.

This platform was engaged with twice with two users "Akshat ThinkTrans" and "Akshat J." All the answers provided were eventually removed due to moderation action and only the discourse which involved discussion about the ways in which this forum can be meaningfully engaged with and the views of some of the users and the moderators are available to be seen; the rest was removed. The same can be found on this <u>general search query</u>⁹ on the CodeProject platform.

Deliverable 2: Writing Informative Articles on UA Topics

Hashnode was identified as one of the avenues of engagement with the developer community as it is a technical blogging platform with a large userbase. To conduct outreach on this platform in the appropriate form, ThinkTrans published two articles on two major topics:

1. <u>"Universal Acceptance of Domain Names and E-mail Addresses" - What is the issue?</u>

⁹ Ignore those about the user "Akshat Garg" who is a different user but comes as a part of this search.



2. What is the ultimate goal of the Domain Name and Email ID Validation?

Both the articles have been hyperlinked to the online blog provided in text format in Appendix A.

Deliverable 3: Expanding the Existing UASG FAQs List

In addition to engaging with the developer community, additional deliverable of the project included identification of questions that could potentially be part of the UASG FAQs list. Towards that effect, a set of questions were shortlisted:

- 1. What is the simplest regular expression to validate emails to not accept them blindly?
- 2. What is the maximum length of a valid email address?
- 3. What is the maximum length of a valid domain name?
- 4. Are IDNs case-sensitive?
- 5. Are internationalized email addresses case-sensitive?
- 6. How to detect language/script of a Punycode?
- 7. Is there a way to avoid showing "xn--" for IDNs?
- 8. How to compare Punycode for visible similarity?
- 9. Is the whole URL required to be converted to Punycode or only the domain name part?
- 10. Can I treat all the domain names (IDNs and ASCII-based) to be IDNs and process them as such without any ill-effects in my code flow?
- 11. While converting IDN to ASCII (or vice-versa) in any programming language, can the whole URL (with protocol parameters such as HTTPS, colons etc) be submitted as is?
- 12. Are IDN conversion functions reversible?
- 13. Are ASCII symbols prohibited altogether from IDNs?
- 14. Just like there is a list of valid TLDs, where can I find a list of valid email TLDs?
- 15. What is the level of support for IDNs in Android in terms of UA-related requirements?
- 16. What is the level of support for IDNs in iOS in terms of UA-related requirements?
- 17. I see a special character in an IDN that I want to type out. How should I type it?

Each question, along with the proposed answer (wherever applicable), have been provided in the accompanying <u>UASG044A</u> document.

Call for Action

Although the actionable objective of this project was to analyze the Q&A patterns of developer discussion forums and to frame and answer some model answers that will provide end users with the correct information, that is not all there is to do. This is just the start for systematic engagement with these highly engaging and influential platforms. This would need constant effort to keep a track of such questions and answer them in the best possible manner while providing links to blog posts and reference pages. This will help make sure UA compliant behaviour is included in the web applications that developers are creating today

However, there is a big challenge due to the presence of legacy questions (some of them being eight years old) and the <u>policy</u> of these discussion forums to concentrate similar discourse into a few pages (questions) rather than diversifying them across multiple questions. The manifestation of this policy decision happens in the form of implementation that dissuades new questioners from posing similar questions with a request to get answers that are more current to the evolving technology landscape. If separate questions are asked, they get tagged to a similar older question with a good number of answers and the new question is hidden from the searches. This ends up propping up the older questions in relevant searches. Of course, there is an option to provide an answer to the older question,



however, that typically buries the new answer under the heap of older answers with higher "<u>upvotes</u>." These upvotes run in the thousands to some of the answers which were relevant at one point but are no longer because the technology landscape has changed (e.g., the introduction of longer TLDs). These higher ranked answers, which are ranked by fellow community members, often hide the answers we provide with the right perspective.

A concerted effort is needed by the **UA community to ensure** that the **relevant answers** on some of the popular discussion forums **get higher ranking/upvotes/stars** on these forums so that the newer developers see them while implementing their own codes. The answers the UA community has to upvote do not need to be the ones done through this project – they can be any answer that matches the requirements of UA compliance. However, as a part of the community, one needs to ensure that the action is concentrated and not diluted across similar differing threads. Rallying behind some good answers is the only way to ensure that they remain most visible.

Another action point the UA community can take is creating a compendium of similar questions and model answers that can be posted on the relevant forums, answered, and upvoted to bring in necessary visibility. It's recommended that the community take the time to analyze the answers posted through this project, and provide their constructive suggestion/feedback/comments to info@uasg.tech.

To summarize, the specific asks in terms of call for action is:

- 1. Ask the UASG community to "up" the answers posted through this project if they outrightly agree with it.
- 2. Ask the UASG community to give feedback/suggestions through info@uasg.tech.



Appendix A

Interactions with Developer Forums

As a part of this pilot study, various developer forums were studied and their Q&A patterns analyzed. Some of the learnings from that exercise are being shared for the benefit of the readers of this report.

Initially, some of the general observations are given on general patterns of interactions with all the Q&A forums, followed by forum-specific discussions.

General Observations

- 1. Although these forums are one of the most effective ways of reaching out directly to the core developer community, as it happens with every data-overloaded platform, visibility remains an important issue and it needs to be gained either through patience or through inorganic means to achieve the objective.
- 2. Most of the questions pertaining to today's UA issue/topics, have been results of some of the implementations/discussions within the developer community when they were implementing domain/email validation codes within their applications. Of course, the technology landscape as it existed then, made those discussions life-savers for the new developers who had similar questions and resorted to the guidance of early developers in this space through these Q&A forums.
- 3. The discourse as it took shape, described in the Observation 2, gave rise to some of the most iconic landmark Q&A discussions with hundreds of responses to a question and some more replies to many of the responses. Also, some of the answers as they were given at the time get "upvoted" as they do solve some of the prevalent problems and creating a lot of visibility among the replies. This gives rise to a digital discourse that has a question and a lot of answers with higher ratings and boosted visibility. However, as the technology landscape changes/improves, these discourses remain as they are and newer answers with renewed understanding, remain buried and do not get visibility.
- 4. To avoid this, some forums employ an archival mechanism by which they shelve some of the questions as they become "outdated" in order to make way for fresh discourse. Unfortunately, some of the topics pertaining to UA do not have that kind of connotation and always appear prevalent and hence do not get archived.
- 5. One of the possible mechanisms could be to post new questions. Some forums encourage that, however, some expect you not to ask the same question but to just boost up the similar question if it exists on the forum and find answers in them. Frequent posting of new questions can also result in the banning of a user from the forum. This creates a hurdle in creating a new discourse.
- 6. Some of the forums are very protective about the content that gets posted in the answers. They are very sensitive if external links are posted as they term it as "site-driving" behaviour. This severely restricts the way in which the answers are posted on those forums.
- 7. Some forums (who do not employ archival mechanisms) are very wary of people answering old questions. It is termed as "bounty hunting" behaviour, a mechanism by which a user gains prominence on their platform by engaging more and more with others.
- 8. Among all of these hurdles, one of the ways to counter them is to rally behind the cause and ensure that the issues/solutions important to UA get visibility by using the prominence gaining mechanisms (often termed as upvoting) en masse and get their voices heard.



Forum Specific Observations and Interaction Patterns

1. StackOverflow-Serverfault

This is by far one of the most dynamic and open discourse platforms for developers. There aren't too many restrictions to answering questions here, including giving links to external resources. This platform has one of the largest developer bases posting and seeking answers.

As a part of this activity, the issues discussed in the general observation sections: 2, 3, 4, and 5 are relevant to this platform. If an inorganic discourse can be created out of the UA community, this platform can serve the UA cause in the most effective way.

2. Reddit (various programming subreddits)

This also serves as one of the most open discourse platforms for the developer community. Unlike StackOverflow, this platform has a wide mandate about the topics to be discussed and is not limited to only programming discussions. Through the "subreddit" mechanism, related and like-minded users come together. The non-programming users do introduce an element of non-programming discourse in the light vein which may not always be hard-core programming based.

Nonetheless, the subreddits in this platform do talk to a very passionate developer community and this should definitely be on the radar of the UA community.

3. CodeProject

This platform was found to be one of the most guarded platforms for answering and one should expect very stringent moderation mechanisms, often putting strict restrictions about how one can go about answers posted. This platform often hosts developers who have some difficulties in the specific areas of code and seek community input to help them out.

Engaging this platform has been by far one of the most challenging parts of this project as it involved getting disbarred as a user while learning how harsh reviews are of some of the answers you post. The observation points 6, 7, and 8 were specifically observed about this platform.

It is not exactly the case that the restrictions they pose are truly protecting the platform. They are definitely restricting the freedom of choice of answering mode. This explains why this platform has decently sized userbase, but is lagging behind some of the other prominent platforms.

4. GitHub

Primarily a code-hosting platform, GitHub attracts some of the best developers in the world actually collaborating and dabbling in coding and discussing some of the most intricate coding aspects. However, this discourse is often in silos that get defined by the specific project on which they are working and remains very specific to the actual code. Recently they launched a feature called "Discussion" which enables the larger GitHub community to get into discussion mode about the things that could be related the project or general topics surrounding that project. However, this feature is still maturing and few discussions have direct questions related to UA topics.

One of the ways to engage this platform through the "Discussion" feature is to "Ask" if the given project supports/plans to support either IDNs or EAI-related functionality. One can definitely expect the community to actively discuss those in the specific context of the project and (hopefully) subsequently implement as per their priorities.



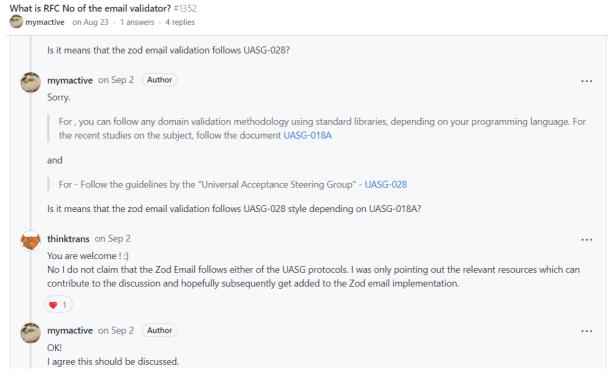
Appendix B

Impact of Engagement with the GitHub Community

The GitHub community was engaged in 18 different interactions over the topic of UA. Out of those, six have taken an active note of the points that were raised with them and have some of them have also acted upon. This shows a very bright spot on the "Engaging with the Community" canvass.

In this section, a glimpse of the engagement methods and the community responses by the GitHub community is provided.

1. https://github.com/colinhacks/zod/discussions/1352#discussioncomment-3532659





2. https://github.com/rowyio/rowy/issues/799#issuecomment-1269252010

⊙ Oper	Email field: Validation regex option #799 harinij opened this issue on Sep 13 · 8 comments	
	thinktrans commented on Oct 5 • edited 👻	•••
	If I may, I would like to request you to not put in the regex as decided. It invariably leaves the Internationalized Email addresses bay. If possible, keep it as simple as this: <e-mail local="" part="">@<domain name=""> Which can be implemented as</domain></e-mail>	at
	For <e-mail local="" part=""> - Follow the guidelines by the "Universal Acceptance Steering Group" - UASG-026 - https://uasg.tech/download/uasg-028-considerations-for-naming-internationalized-email-mailboxes-en/</e-mail>	
	For <domain name="">, you can follow any domain validation methodology using standard libraries, depending on your programm language. For the recent studies on the subject, follow the document UASG-018A - https://uasg.tech/download/uasg-018a-ua- compliance-of-some-programming-language-libraries-and-frameworks-en/.</domain>	ing
	notsidney commented on Oct 6 Member	
	Hi @thinktrans, this will be an optional feature that has to be explicitly enabled in column config.	
	ashutosh887 commented 7 days ago	
	I would like to work on this Issue!	
\$	RajGM commented 7 days ago • edited 🖌	

Hi @ashutosh887

I made a PR for the issues and will open a discussion about the errors I face with the requested changes.



3. <u>https://o</u> ⊘c∞	github.com/jupegarnica/regular_expressions/issues/8#issuecomment-12 decide if we want to use this #8 github-actions bot opened this issue on Sep 18 · 2 comments	269440	923
	14 /[a-zA-20-9.:#3%&`*+/=?^_ { }~-]+@[a-zA-20-9](?:[a-zA-20-9-]{0,61}[a-zA-20-9])?(?:\.[a-zA-20-9]	(?:[a-zA-20	
	S github-actions bot added branch: main TODO type: todo labels on Sep 18		
	thinktrans commented on Oct 5		
	Commenting on the regex used for validating the email address. it is not compliant with the Internationalized Email containing non-Latin characters.	Addresses	
	If I may, I would like to request you to keep it as simple as this: <e-mail local="" part="">@<domain name=""></domain></e-mail>		
	Which can be implemented as follows. For <e-mail local="" part=""> - Follow the guidelines by the "Universal Acceptance Steering Group" - UASG-026 - https://uasg.tech/download/uasg-028-considerations-for-naming-internationalized-email-mailboxes-en/</e-mail>		
	For <domain name="">, you can follow any domain validation methodology using standard libraries, depending on your language. For the recent studies on the subject, follow the document UASG-018A - https://uasg.tech/download/uas compliance-of-some-programming-language-libraries-and-frameworks-en/.</domain>		ing
	jupegamica commented on Oct 6	Owner	
	thanks, I will keep it in mind.		
	Jupegarnica closed this as completed on Oct 6		



4. https://github.com/popcorndao/sweet-caramel/issues/1271#issuecomment-1273461312

hinktrans commented on Oct 5	
	decided. It invariably leaves the Internationalized Email addres
ay. If possible, keep it as simple as this:	
<e-mail local="" part="">@<domain name=""></domain></e-mail>	
Vhich can be implemented as	
or <e-mail local="" part=""> - Follow the guidelines by the "Univ</e-mail>	versal Acceptance Steering Group" - UASG-026 -
ttps://uasg.tech/download/uasg-028-considerations-for-nar	
	thodology using standard libraries, depending on your progra
	cument UASG-018A - https://uasg.tech/download/uasg-018a-
ompliance-of-some-programming-language-libraries-and-fr	ameworks-en/.
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	rne-z on Oct 10
	rne-z on Oct 10 Collaborato
• 1	Collaborato
arne-z assigned Ajiva-D and arne-z and unassigned a RedVeil commented on Oct 10 RedVeil @anthonymartin Should we include this as a new to	Collaborato
arne-z assigned Ajiva-D and arne-z and unassigned a RedVeil commented on Oct 10	Collaborate
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arne-z assigned Ajiva-D and arne-z and unassigned a cedVeil commented on Oct 10 RedVeil @anthonymartin Should we include this as a new to nthonymartin commented on Oct 10	Collaborat iicket? Contribut



5. https://github.com/surajs1n/email-normalization/issues/8#issuecomment-1279817387

200	thinktrans commented on Oct 5		
	EmailValidator is definitely a good choice as it supports even the Internationalized Email Addresses.		
	If I may, I would like to request you to keep it as simple as this:		
	<e-mail local="" name="" parts@<domain=""> Which can be implemented as</e-mail>		
	For <e-mail local="" part=""> - Follow the guidelines by the "Universal Acceptance Steering Group" - UASG-026 - https://uasg.tech/download/uasg-028-considerations-for-naming-internationalized-email-mailboxes-en/</e-mail>		
	For <domain name="">, you can follow any domain validation methodology using standard libraries, depending on y language. For the recent studies on the subject, follow the document UASG-018A - https://uasg.tech/download/u compliance-of-some-programming-language-libraries-and-frameworks-en/.</domain>		
	surajs1n commented on Oct 16	Owner	
	surajs1n commented on Oct 16 This is a good suggestion @prateeknischal @thinktrans . Let me implement and push it into my next release. I w		
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6. https://github.com/directus/directus/discussions/13950#discussioncomment-3902796

