

Empirical study on chat rooms for Stack Overflow questions

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Overview

- ▶ Communications for Developers
- ▶ Chat rooms mechanics on Stack Overflow
- ▶ Characteristics of Stack Overflow chat rooms
- ▶ Impact of chat rooms on Stack Overflow
- ▶ Extra bits

Communication Channels

A communication channel is a method that developers find information or discuss with other developers.

e.g. E-mail, Mailing list, IRC, Slack, Stack Overflow, Documentation. . .

What are chat rooms in Stack Overflow?

Chat rooms FAQ

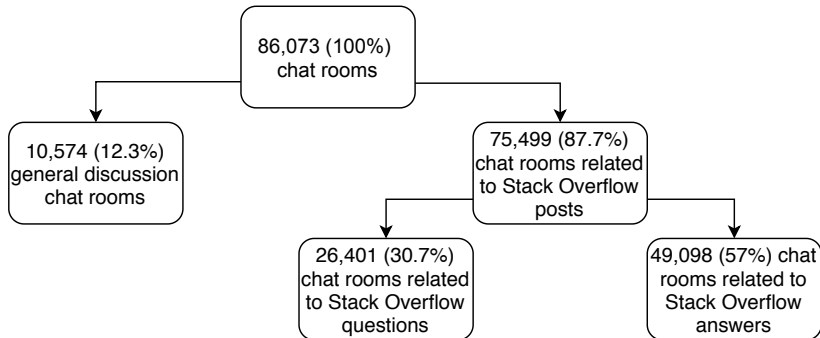
What is this?

It's a real time, persistent collaborative chat for the [Stack Overflow](#) community. Only members of Stack Overflow with at least **20** reputation may talk here – but all the conversations are free, open, and public to read by anyone.

What can we chat about? ►

This site is an extension of Stack Overflow, so discussion should more or less revolve around the same topics you'd find at Stack Overflow — but in an interactive, less strictly Q&A focused way. Do have fun, but please keep it professional and *always* be respectful of your fellow community members.

Types of Chat Rooms



How are question chat rooms created?

Is there a reason why databases such as `MySQL` and `MongoDB` doesn't work for you? – [Cosmos Zhu](#) 11 mins ago

▲ @CosmosZhu I've looked around and found that having `MySQL` or `MongoDB` would mean the electron app can't be "portable" so that it can be distributed easily. – [Cosmos547](#) 10 mins ago

What about `sqlite` it stores the database in a file and both `python` and `node` have modules which can interact with a `sqlite` database. – [Cosmos Zhu](#) 9 mins ago

▲ @CosmosZhu `sqlite` does seem to work. Do you have other suggestions for a database that's also in JSON form like `tinydb`? – [Cosmos547](#) 2 mins ago

Is there a reason you want to create the database in Python? If using javascript to both create the database then the option to choose a database will be so much easier. – [Cosmos Zhu](#) 1 min ago [Edit](#)

▲ @CosmosZhu I've already implemented the processing stage by Python and only want to use it in electron. I guess it makes sense to port it into javascript so that the same database can be shared. Do you have any suggestion for a database for javascript that would serve the need? – [Cosmos547](#) 4 secs ago

Please avoid extended discussions in comments. Would you like to [automatically move this discussion to chat](#)?

Is there a reason why databases such as `MySQL` and `MongoDB` doesn't work for you? – [Cosmos Zhu](#) 36 mins ago

▲ @CosmosZhu I've looked around and found that having `MySQL` or `MongoDB` would mean the electron app can't be "portable" so that it can be distributed easily. – [Cosmos547](#) 35 mins ago

What about `sqlite` it stores the database in a file and both `python` and `node` have modules which can interact with a `sqlite` database. – [Cosmos Zhu](#) 34 mins ago

▲ @CosmosZhu `sqlite` does seem to work. Do you have other suggestions for a database that's also in JSON form like tinydb? – [Cosmos547](#) 28 mins ago

Is there a reason you want to create the database in Python? If using javascript to both create the database then the option to choose a database will be so much easier. – [Cosmos Zhu](#) 26 mins ago

▲ @CosmosZhu I've already implemented the processing stage by Python and only want to use it in electron. I guess it makes sense to port it into javascript so that the same database can be shared. Do you have any suggestion for a database for javascript that would serve the need? – [Cosmos547](#) 25 mins ago

Let us [continue this discussion in chat](#). – [Cosmos Zhu](#) 24 mins ago

[add a comment](#)

Begining of chat room



Jan 31, 13:07

0

Q: OpenCV : the difference between mask and ROI



I tried to set a ROI with angle in an image. At first, I thought that using a mask would give me the same result as setting the ROI in my IplImage structure. Then, I would just use cvResize the same way I did when I used ROI but this time for a mask. However, this is obviously not this easy, b...

[opencv](#) [roi](#)

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Banthar



You can do it with `cvGetPerspectiveTransform` and `cvWarpPerspective`.

CTZStef



in `CvMat* cvGetPerspectiveTransform(const CvPoint2D32f* src, const CvPoint2D32f* dst, CvMat* mapMatrix)`, `src` would be my 4 points in my `boxPoints`, and `dst` the points `[0,0]`, `[0,destImg->width]`, `[destImg->height,0]`, `[destImg->height,destImg->width]` ?

... Omitted messages. . .

CTZStef



then I will approve it and open a new question if I need further help
THANK you very much Banthar for your help!!!!

Jan 31, 13:33

14 days later...

Feeds



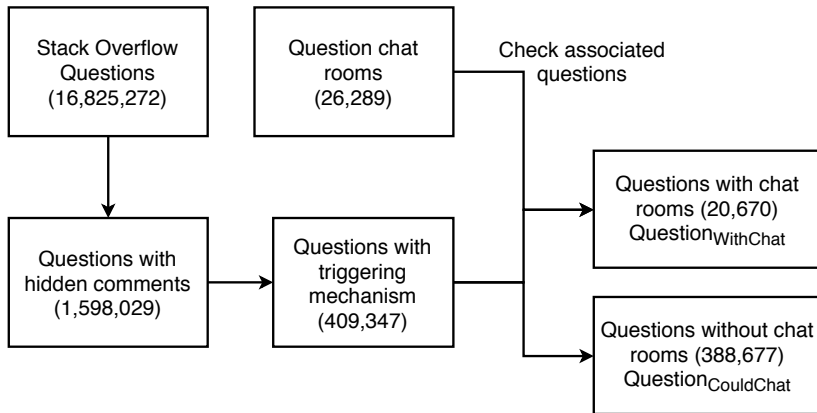
This room has been **automatically frozen for inactivity**

Feb 14, 19:52

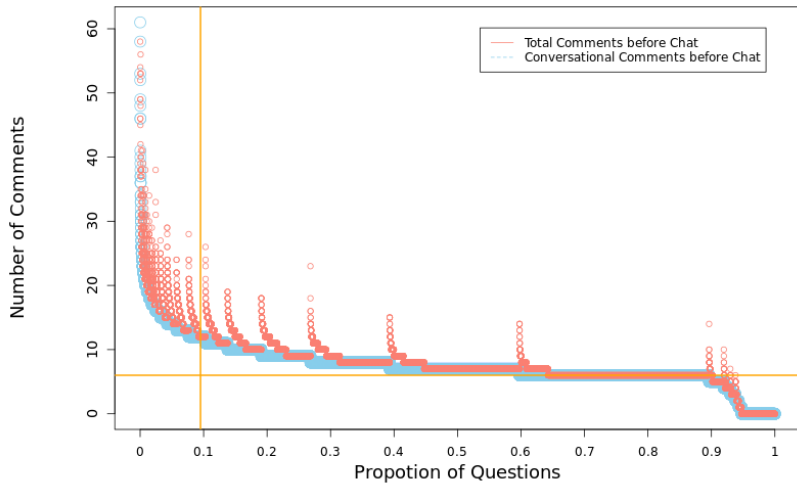
The last message was posted 2780 days ago.

End of chat room

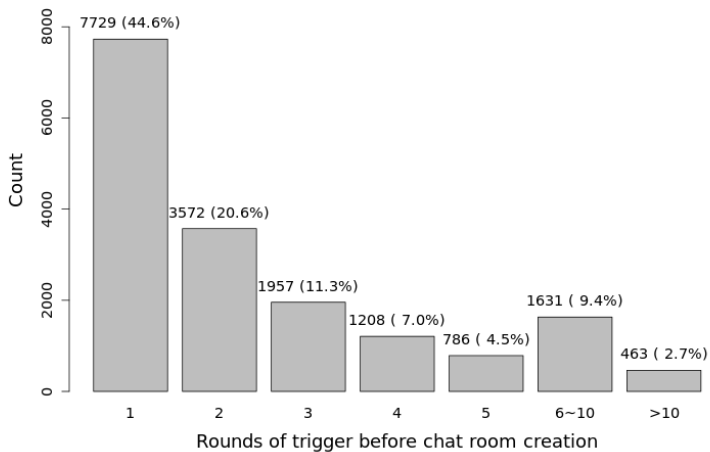
Data selection



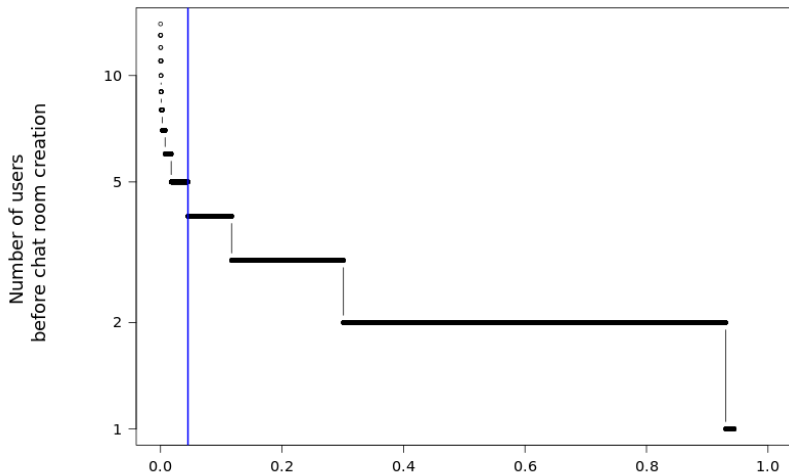
Comments before creation of chat room



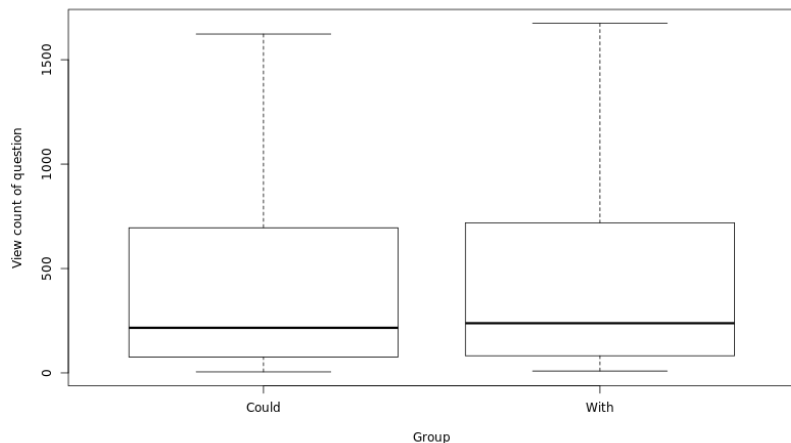
Rounds of trigger



62.9% of chat rooms are created after two users in comments

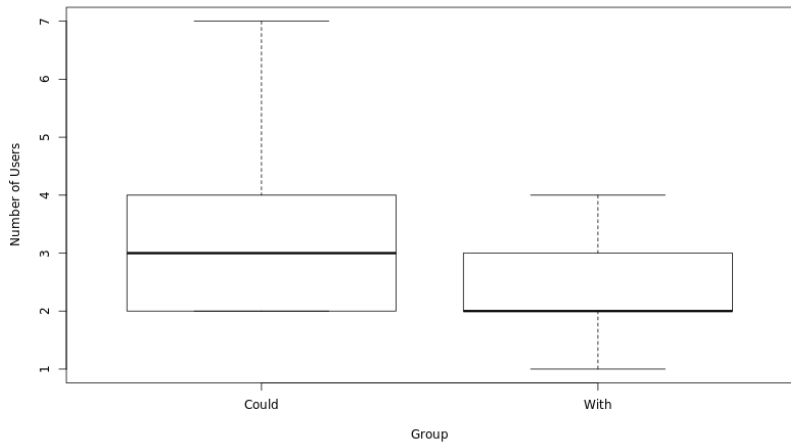


No difference between number of views between Question_{WithChat} and Question_{CouldChat}



74.0% of sample test have $p.\text{value} \geq 0.05$

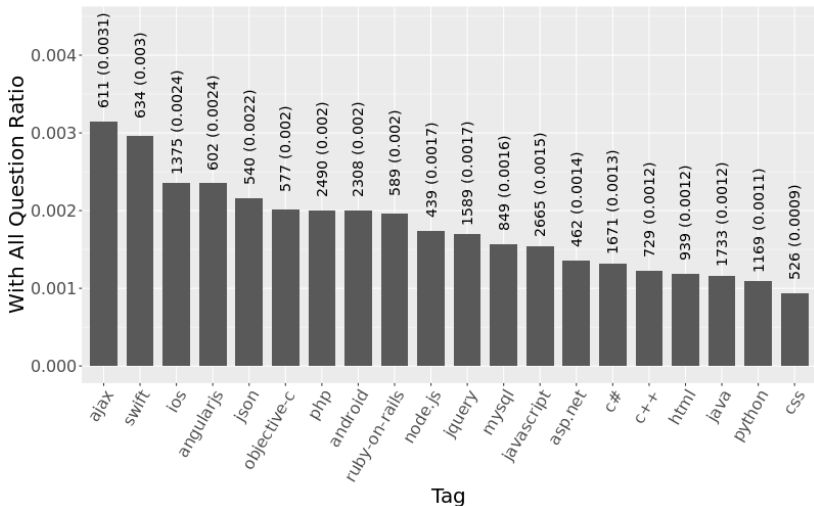
Question_{WithChat} have less users in comments before chat



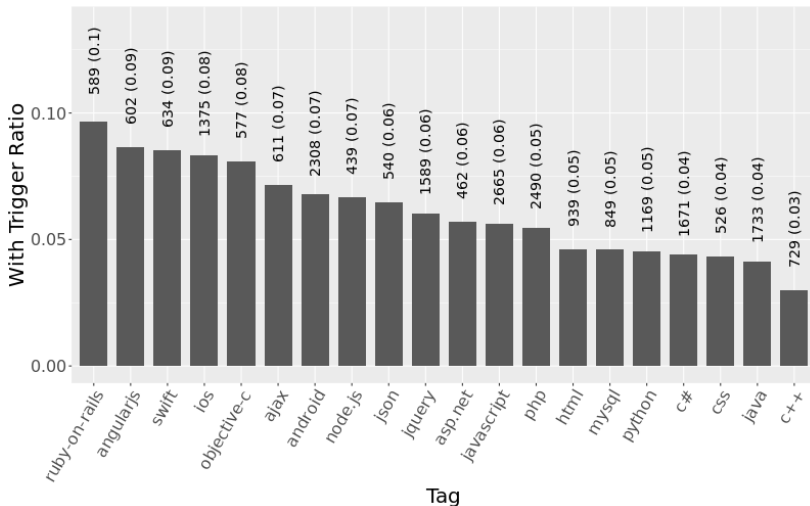
User reputation before creation of chat room

	Question _{WithChat} Median	Question _{CouldChat} Median
Max user reputation in comments	8,636.5	29,711
Min user reputation in comments	378	166
Asker Reputation of question	457	173

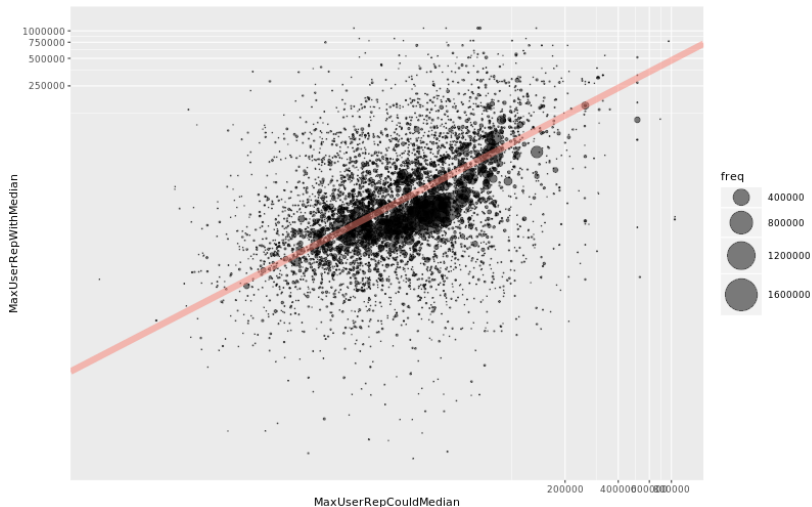
Chat room usage differs across communities



Trigger acceptance rate differs across communities

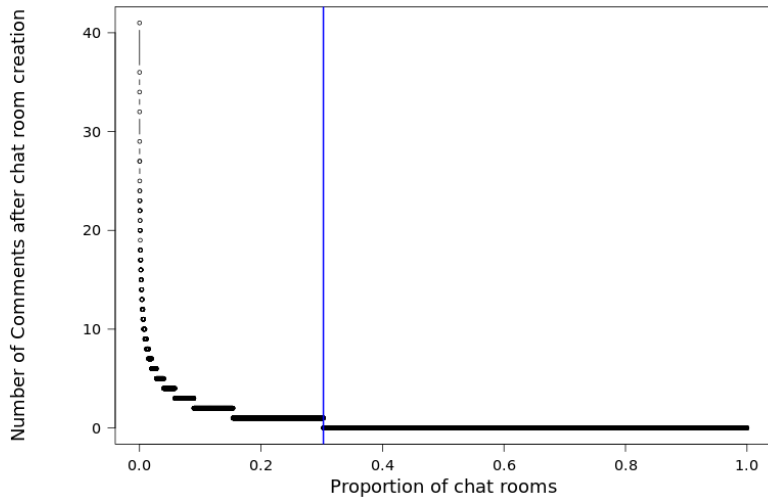


Largest communities on Stack Overflow tend to have larger difference between maximum user reputation in comments before creation of chat room

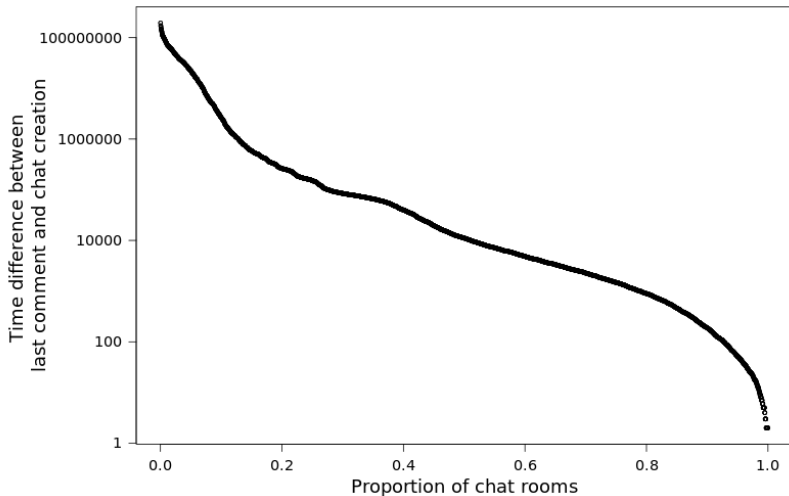


What are the effects of chat rooms?

69.7% of the discussion migrates to chat room after its creation

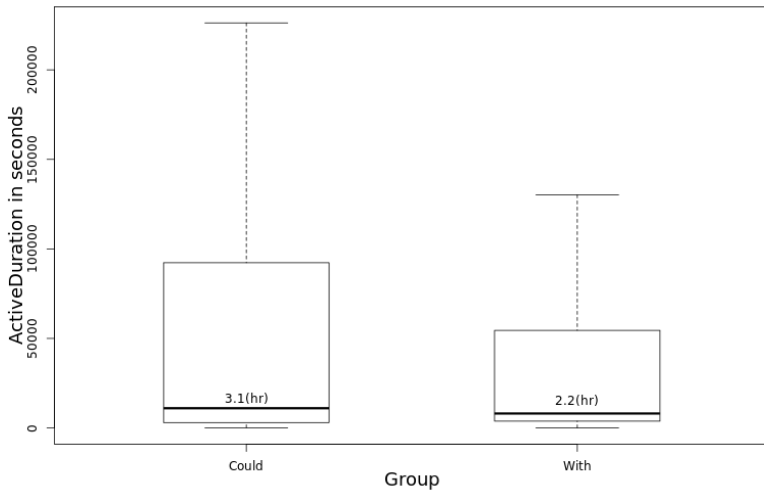


Distribution of time difference between time of last comment and chat room creation time



88.0% of comments are posted when the chat room is active

Discussions finishes faster for Question_{WithChat}



Extras! Interesting bits

Information shared in chat rooms

External resources in chat rooms

- ▶ 51,800 messages contain at least one URL in 17,911 (68.13%) chat rooms

	domain	freq
1:	stackoverflow.com	9891
2:	github.com	3852
3:	jsfiddle.net	2838
4:	pastebin.com	2115
5:	i.stack.imgur.com	1912
6:	gravatar.com	1594
7:	gist.github.com	913
8:	msdn.microsoft.com	678
9:	imgur.com	655
10:	en.wikipedia.org	598

Information shared in chat rooms continued..

Code segments in chat rooms

- ▶ 92,011 (6.11%) of messages contain code segments in 18,756 (71.35%) of chat rooms

Beyond the chat room conversation

- ▶ 6,580 messages in 2,440 (9.28%) chat rooms mentioned “e mail”, “e-mail” or “email”
- ▶ 2,428 messages contains an email address in 1,578 (6.00%) chat rooms

Thank you!