

The Standardisation of 5G & IoT within the 3GPP

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UvA / Media Studies
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Data: Summary

- 89 mailing lists scraped, 16 remaining
- Working Groups on 5G & IoT:

Mailing List	:Nr. of Msgs	Years Active	Nr. of Domains
3GPP_TSG_RAN_WG5_5G_NR	: 894	2017-2021	35
3GPP_TSG_RAN_WG4_IOT	: 614	2015-2017	29
3GPP_TSG_RAN_WG5_IOT	: 385	2016-2017	26
3GPP_TSG_CT_WG1_122E_5G	: 1,634	2020-2020	28
3GPP_TSG_SA_WG1	: 18,801	1998-2021	396
3GPP_TSG_SA_WG2	: 74,796		
3GPP_TSG_SA_WG3	:		
3GPP_TSG_SA_WG4	: 13,824	1998-2021	265
3GPP_TSG_SA_WG5	: 17,513	1999-2021	168
3GPP_TSG_SA_WG6	: 25,081	2015-2021	79



The period of interest is the development time of [Rel-17](#) which start 2018-06-15 and ends 2022-06-10

Data: Acquisition Constraints & Issues

- Dealing with many different conventions
 - 'Re:', 'AW:', '回复:', '答复:' all mean the same thing
- Some messages or header-fields are not public
 - [log in to unmask]
- Send messages don't always reflect intentions
 - Pressing (not) 'reply-all' by mistake happens to everyone

Data: Lens on Actors within 3GPP

Mailing lists support the deliberative processes to design new standards.



Deliberation literature studies online quality indicators.



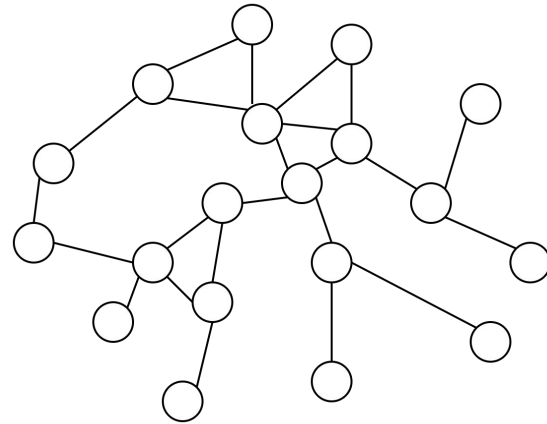
Deliberative Indicators*:

1. Participation Rate
2. Activeness
3. Connectivity
4. Continuity
5. Uniformity
6. Responsiveness

Deliberative Indicators

Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

Actor a(edges), can be a domain (huawei.com) or a localpart (Heinrich.vonKleist).

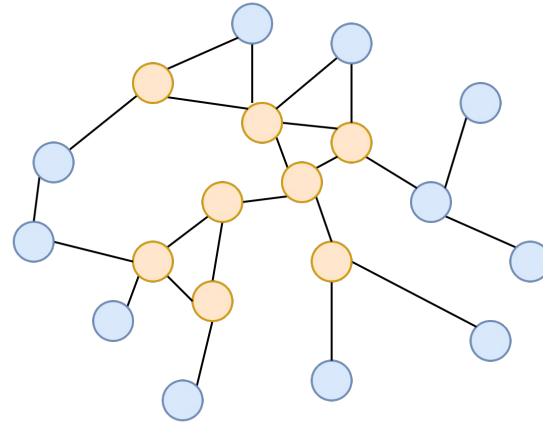


Deliberative Indicators

Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

○ Active actor, $a(\text{contribution} \neq 0, \text{edges})$

○ Passive actor $a(\text{contribution} = 0, \text{edges})$



Deliberative Indicators

Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

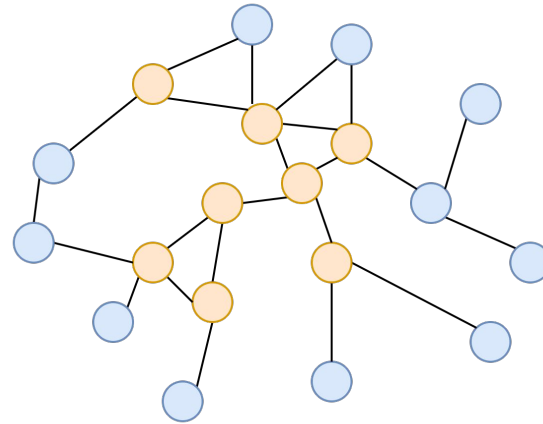
- Of all actors, what fraction participates in:
 - 3GPP
 - Working Group
 - Mailing list
 - Message thread
 - ...

Deliberative Indicators

Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

○ Active actor a (contribution, edges)

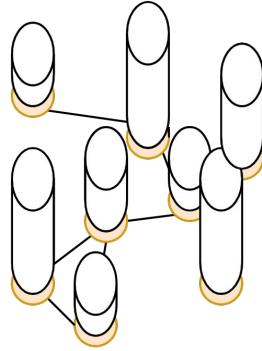
○ Passive actor



Deliberative Indicators

Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

- Active actor $a(\text{time}, \text{contribution} \neq 0, \text{edges})$



Deliberative Indicators

Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

- How much have actors contributed to?:
 - Working Groups
 - Mailing lists
 - Message threads
 - ...
- What have actors contributed?:
 - Started threads
 - Replies
 - ...
- When have actors contributed?
 - Close to the release date of new/specific protocols?

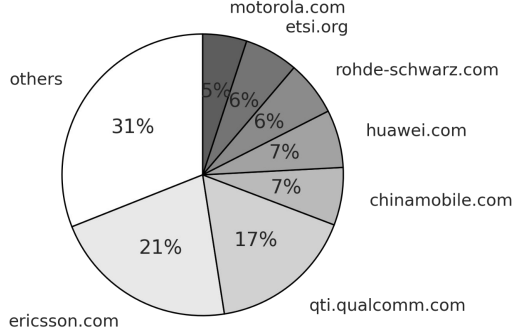
5G Mailing Lists

Deliberative Indicators

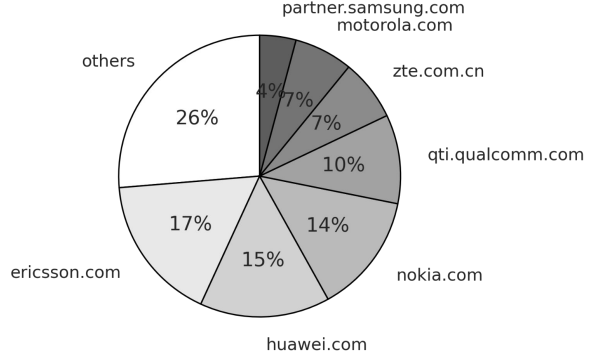
Part. - Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

% of Send
Msgs

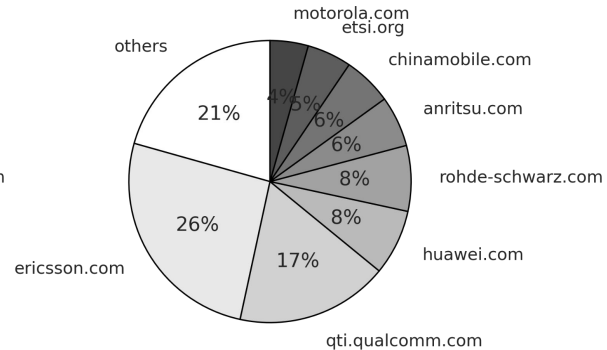
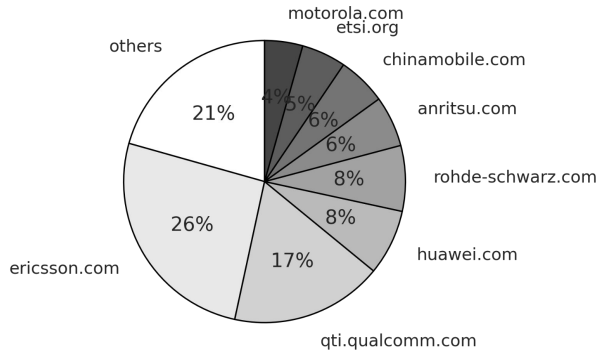
3GPP_TSG_RAN_WG5_5G_NR



3GPP_TSG_CT_WG1_122E_5G



% of Received
Msgs

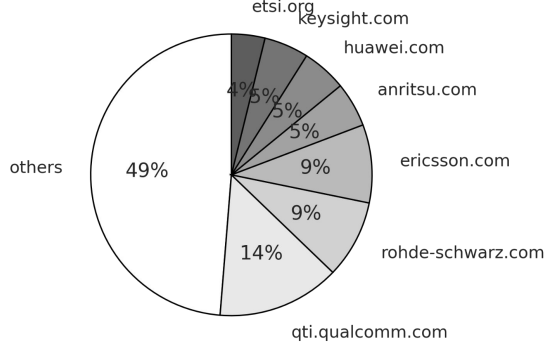


Deliberative Indicators

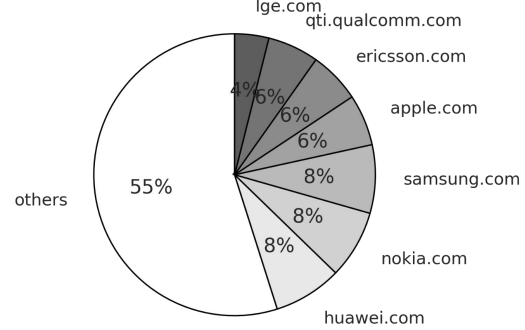
Part. - Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

% of Senders

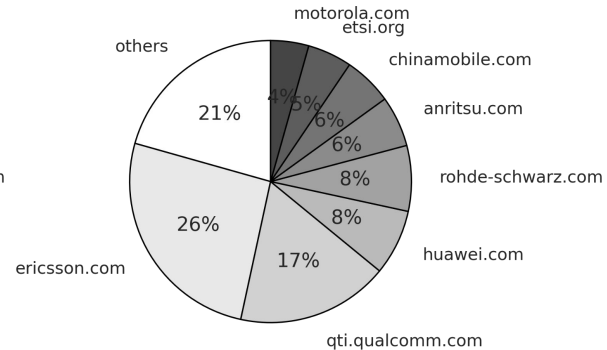
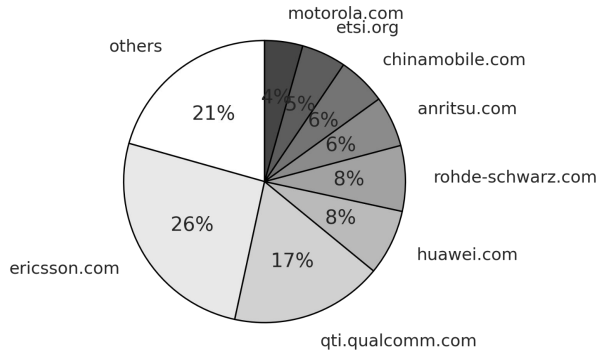
3GPP_TSG_RAN_WG5_5G_NR



3GPP_TSG_CT_WG1_122E_5G



% of Receivers

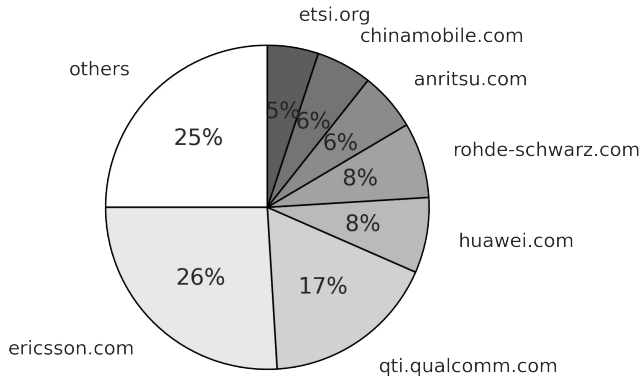


Deliberative Indicators

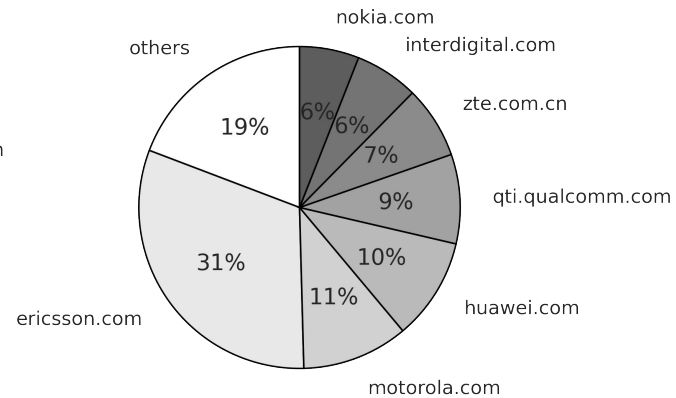
Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

% of Started
Threads

3GPP_TSG_RAN_WG5_5G_NR



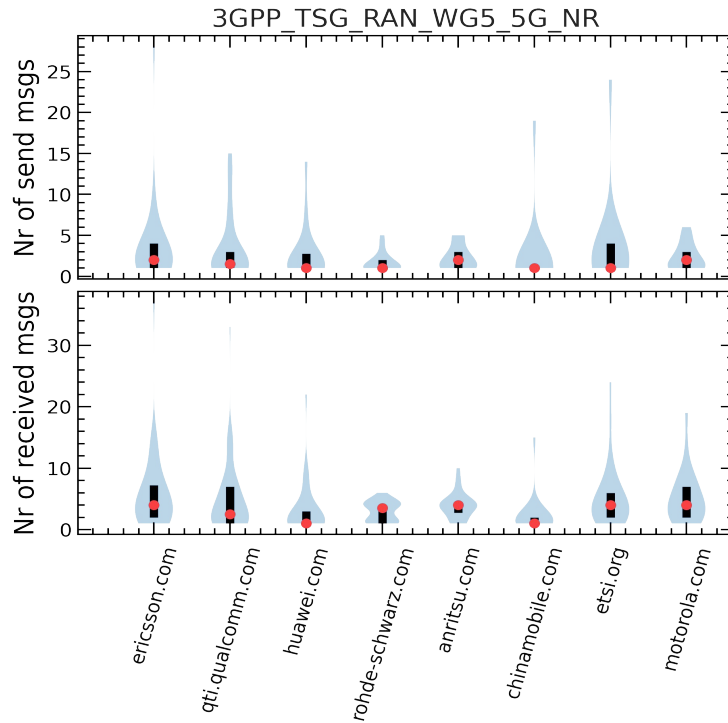
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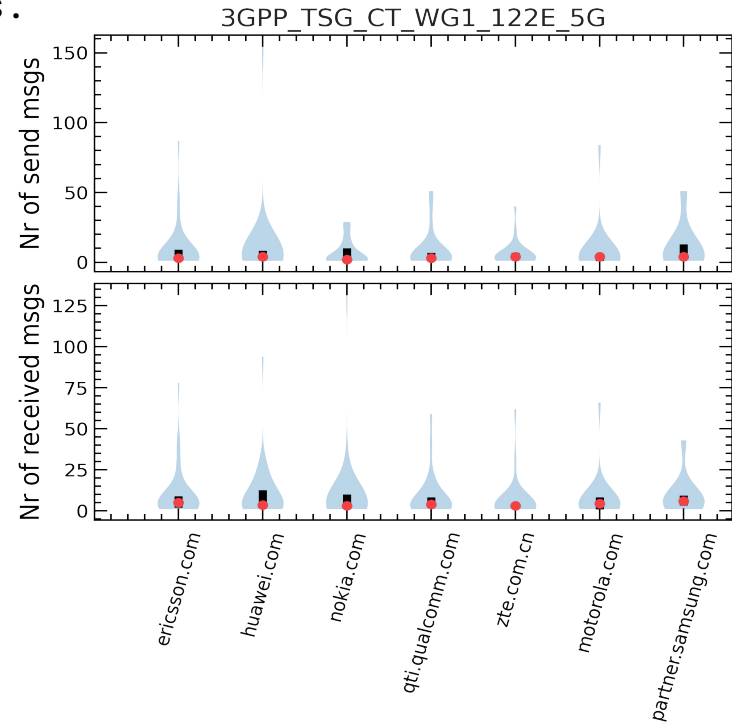
Deliberative Indicators

Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

Activity of localparts within domains. The domains are those having send most messages.



messages.

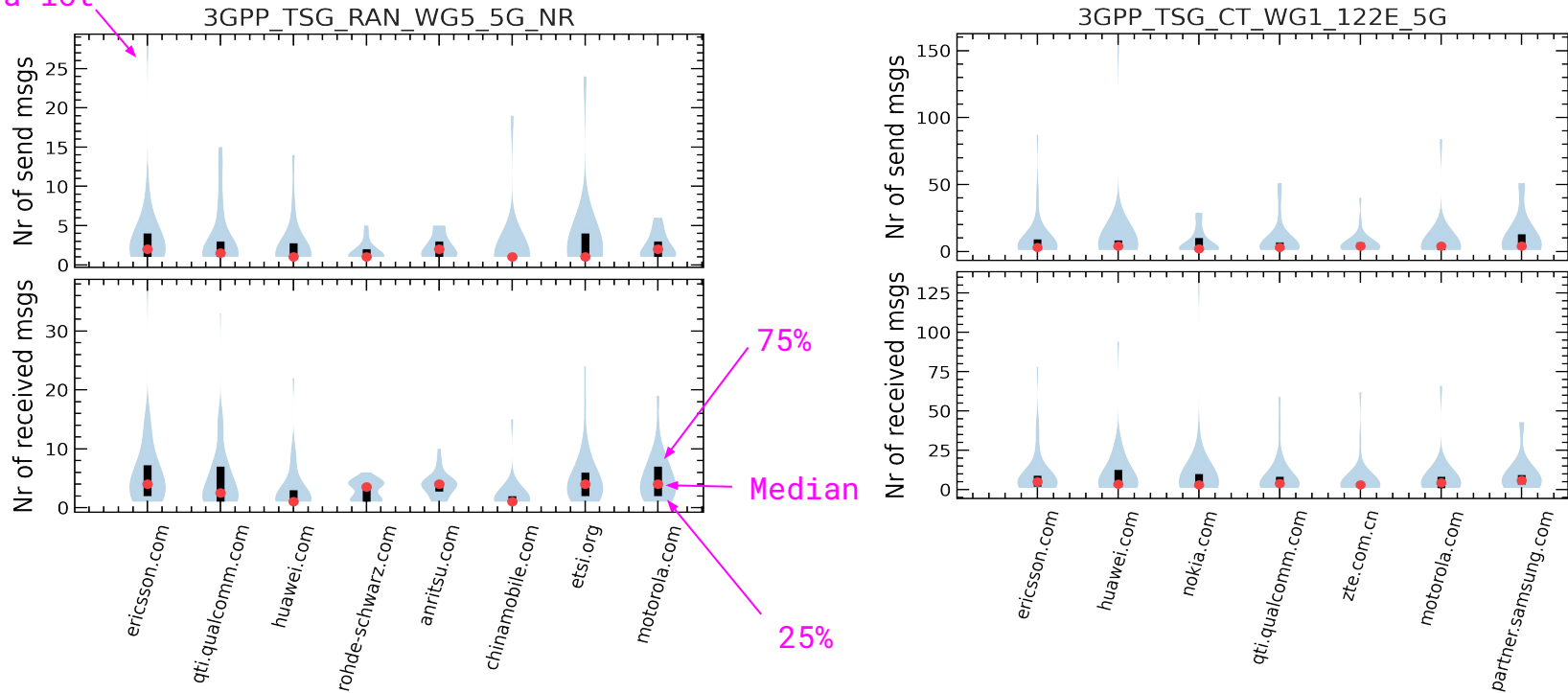


Deliberative Indicators

Part. - Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

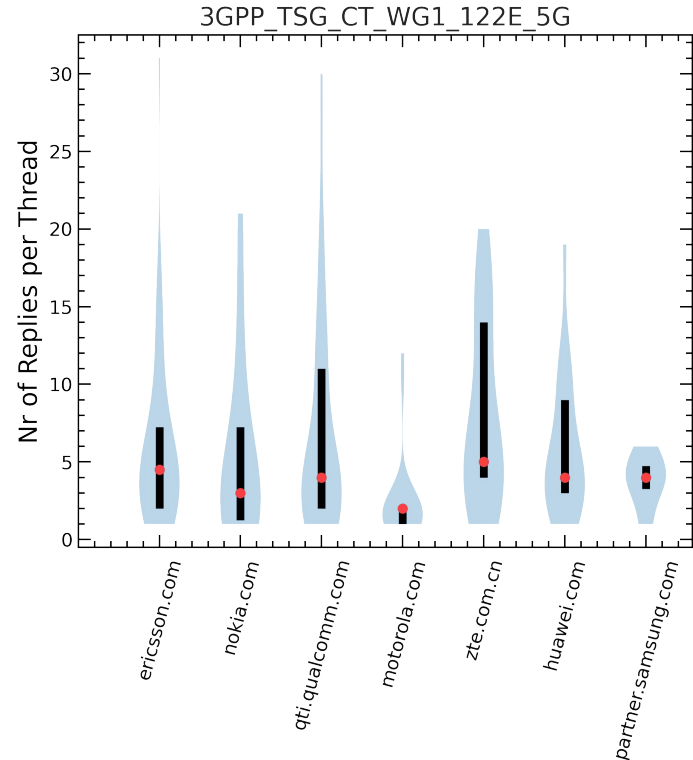
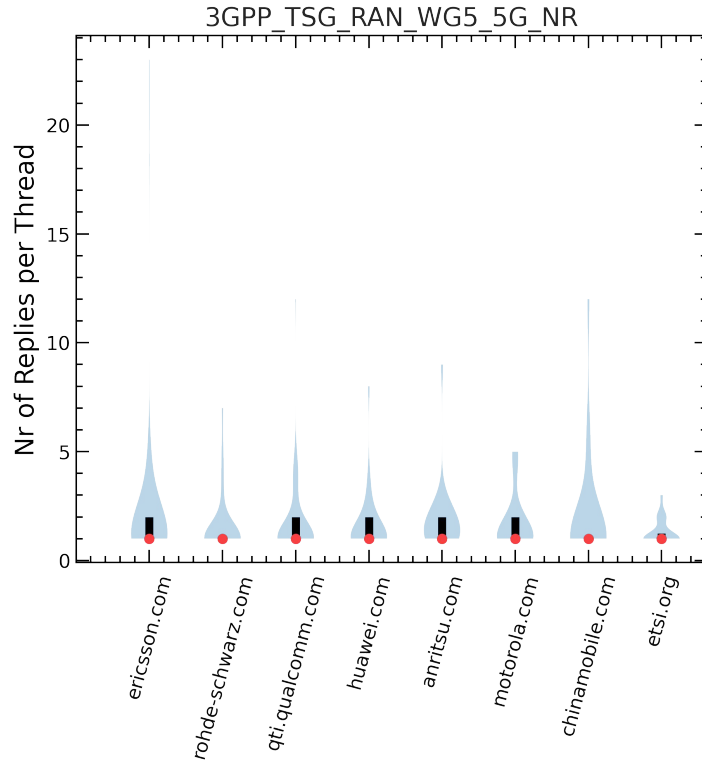
One localpart sends a lot

Activity of localparts within domains



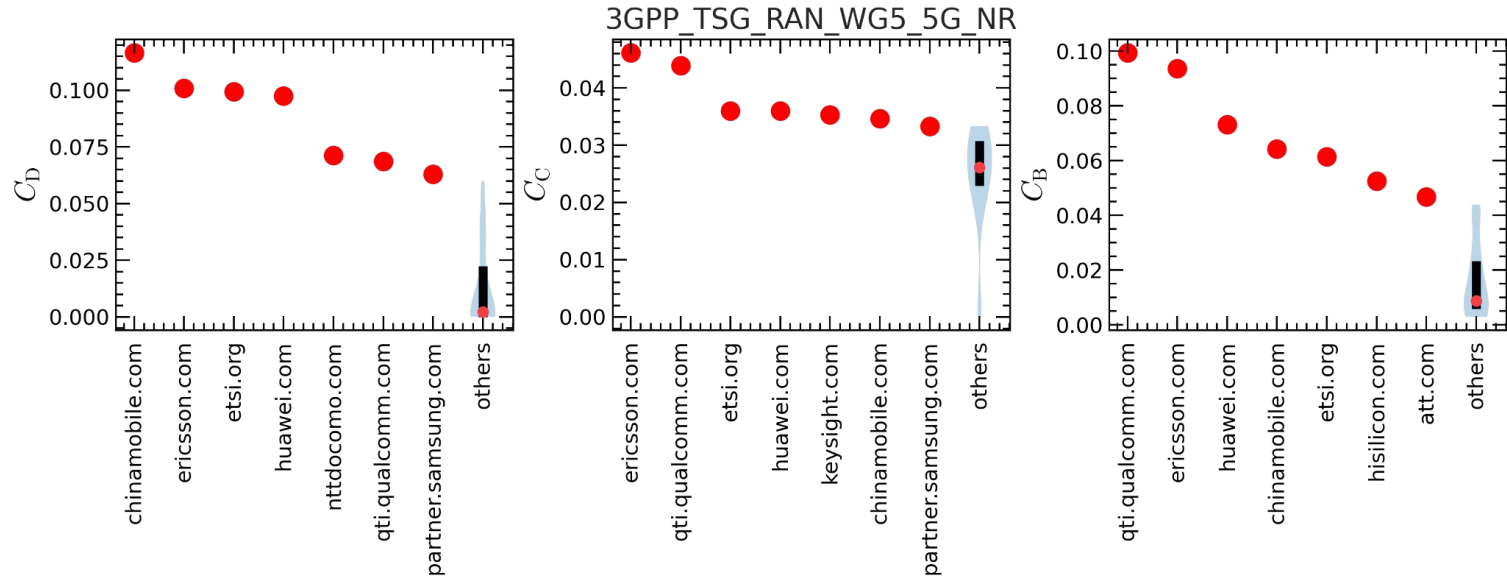
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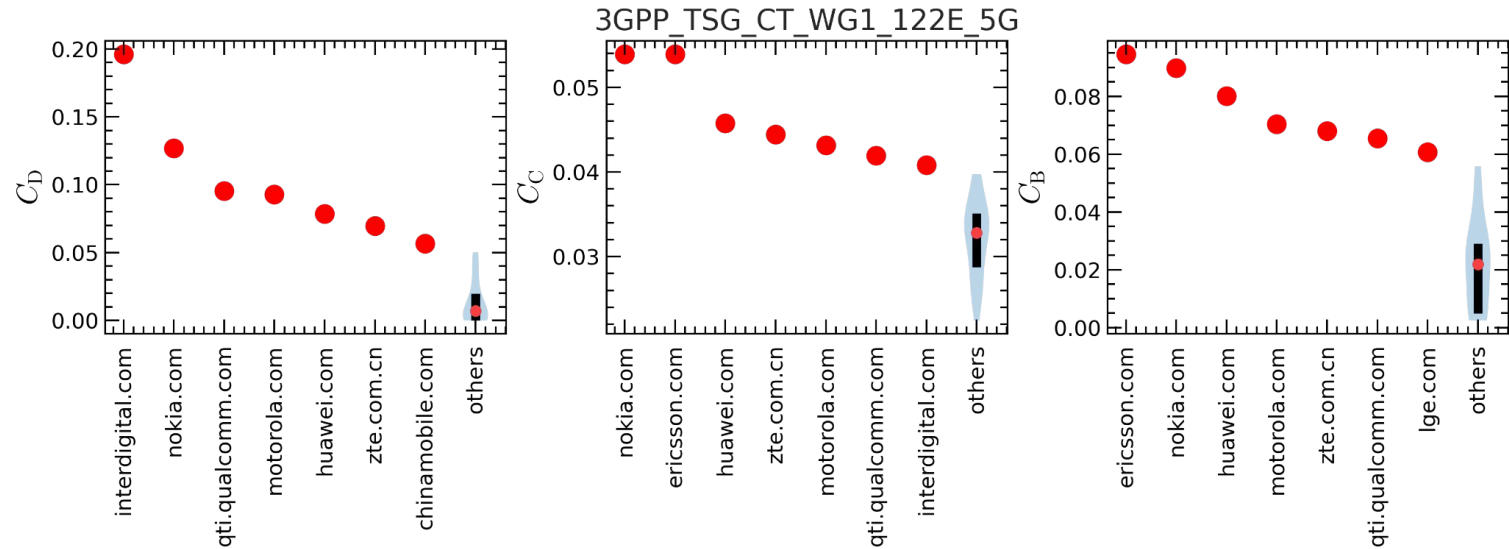
Deliberative Indicators

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Deliberative Indicators

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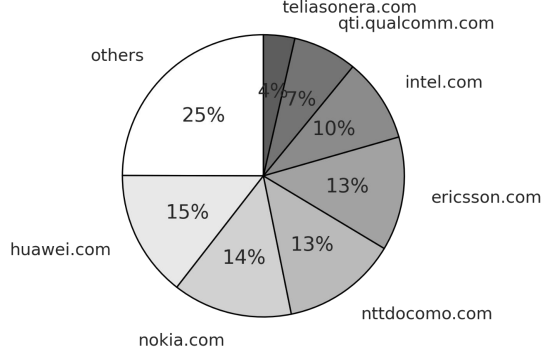
IoT Mailing Lists

Deliberative Indicators

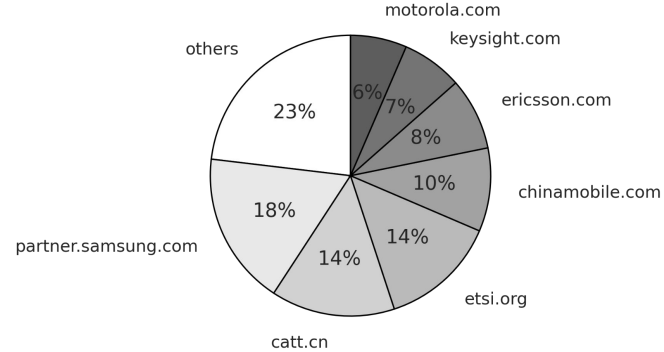
Part. - Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

% of Send
Msgs

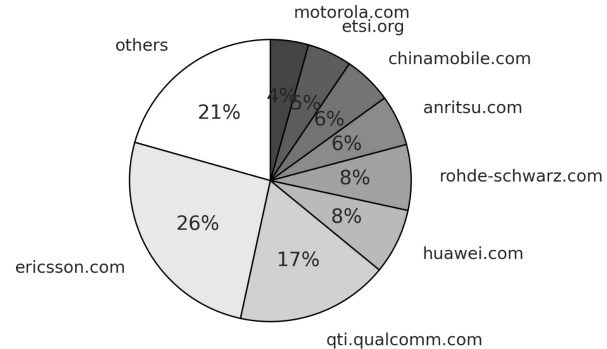
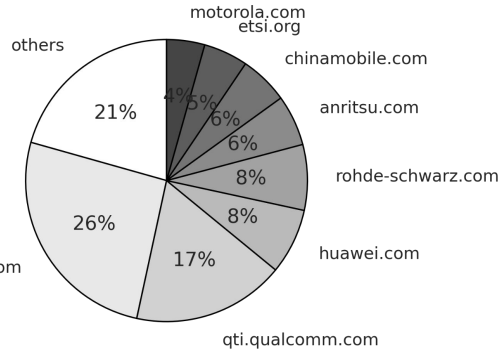
3GPP_TSG_RAN_WG4_IOT



3GPP_TSG_RAN_WG5_IOT



% of Received
Msgs

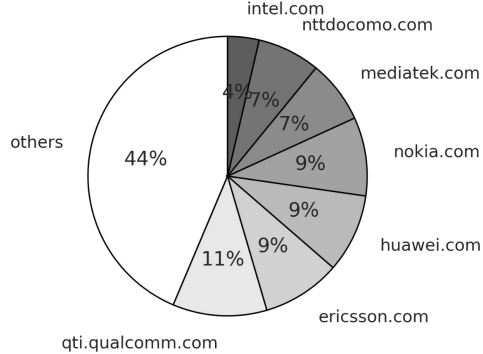


Deliberative Indicators

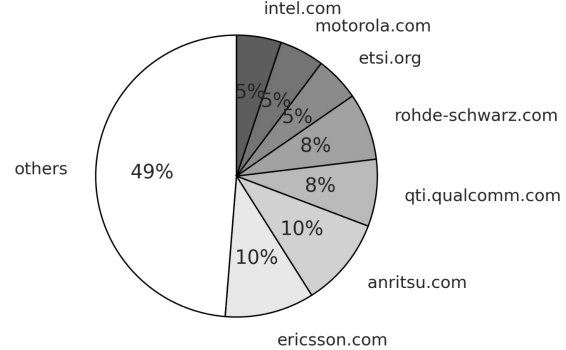
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% of Senders

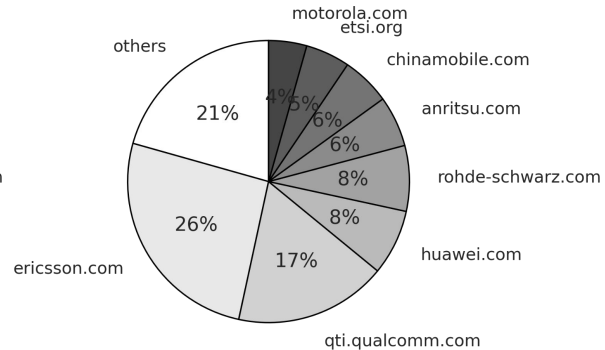
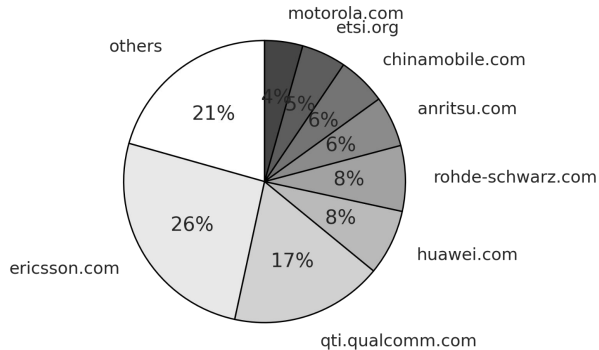
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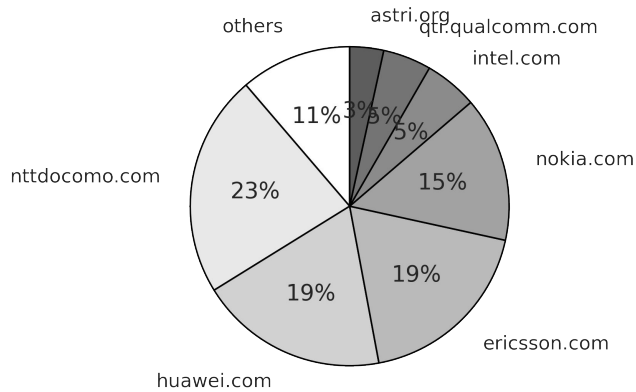


Deliberative Indicators

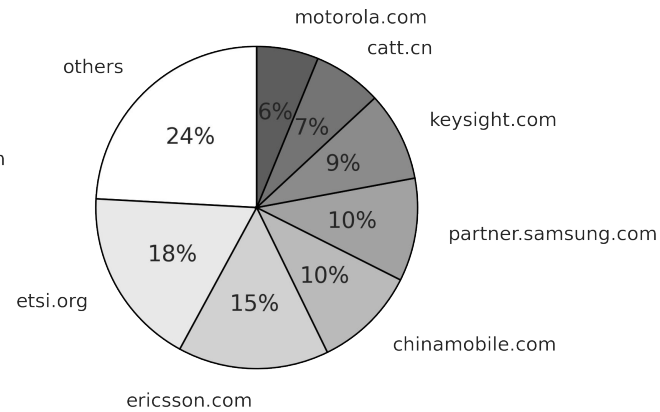
Part. - Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

% of Started
Threads

3GPP_TSG_RAN_WG4_IOT



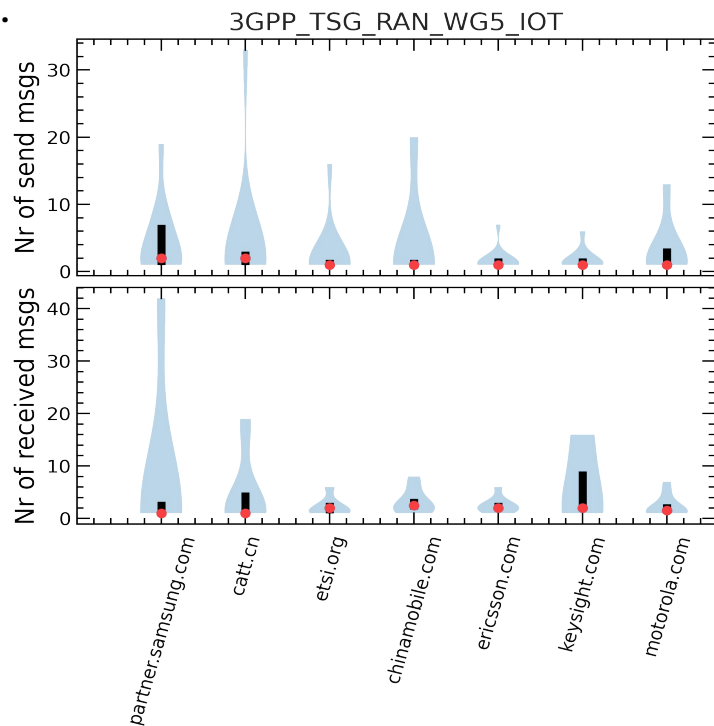
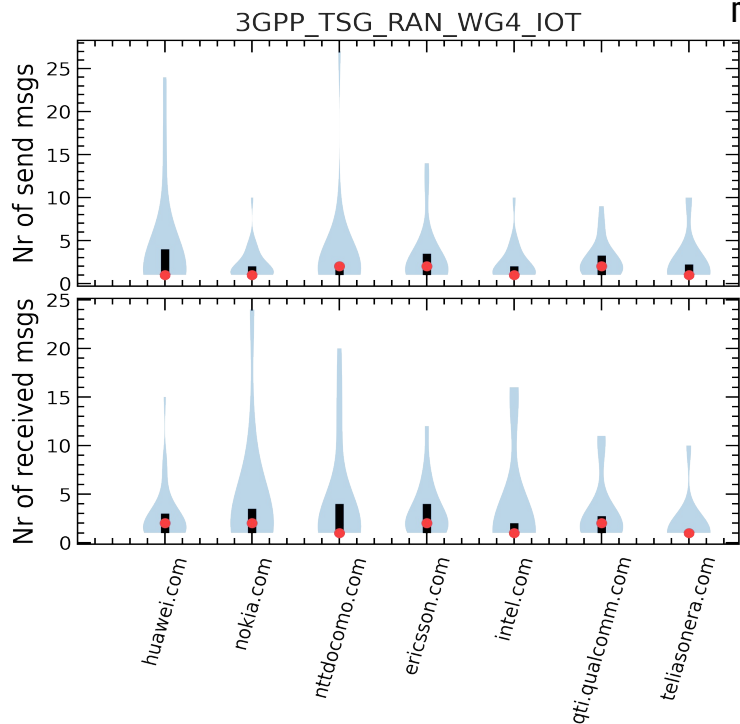
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Deliberative Indicators

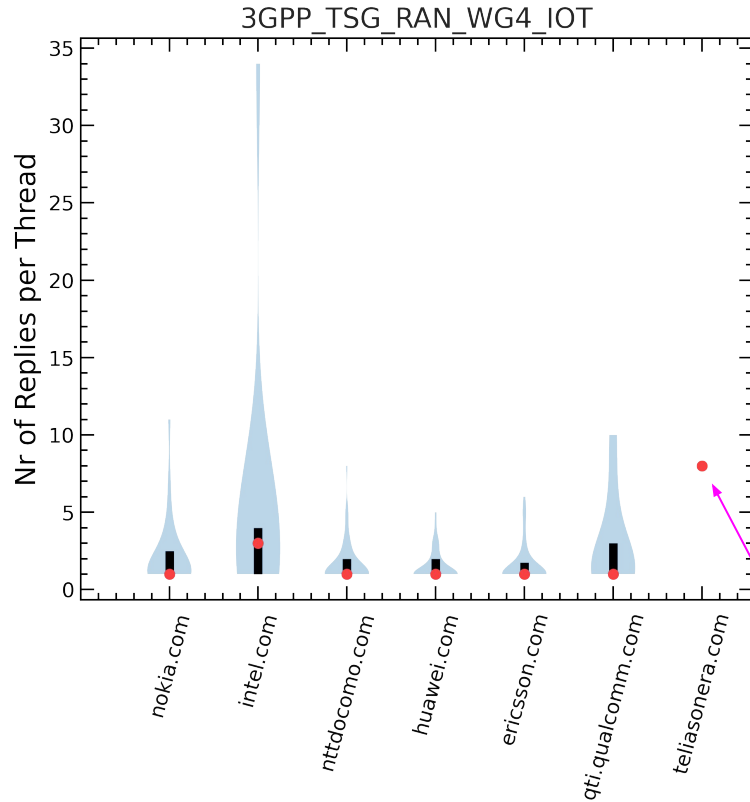
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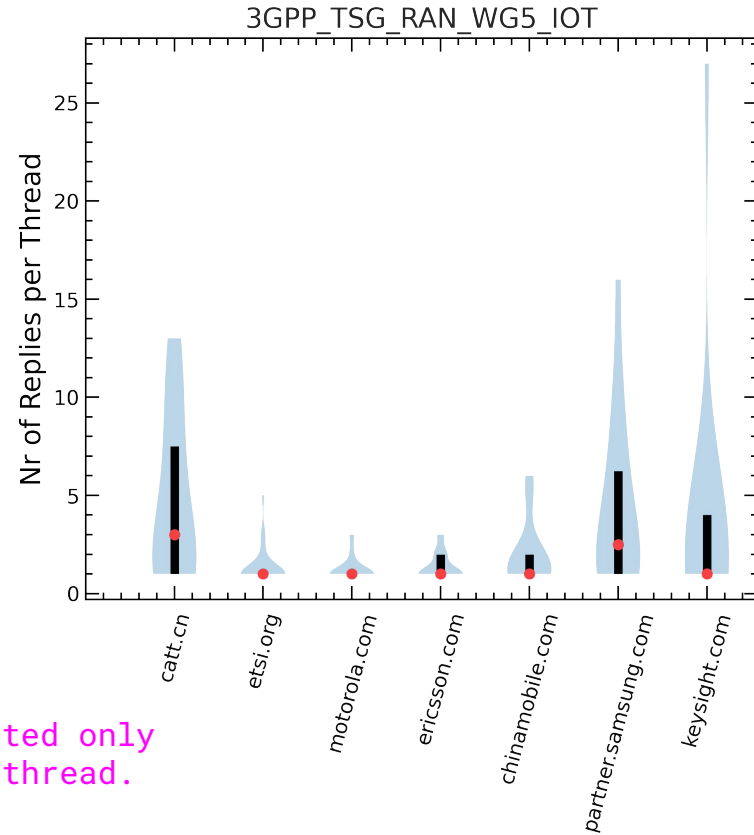


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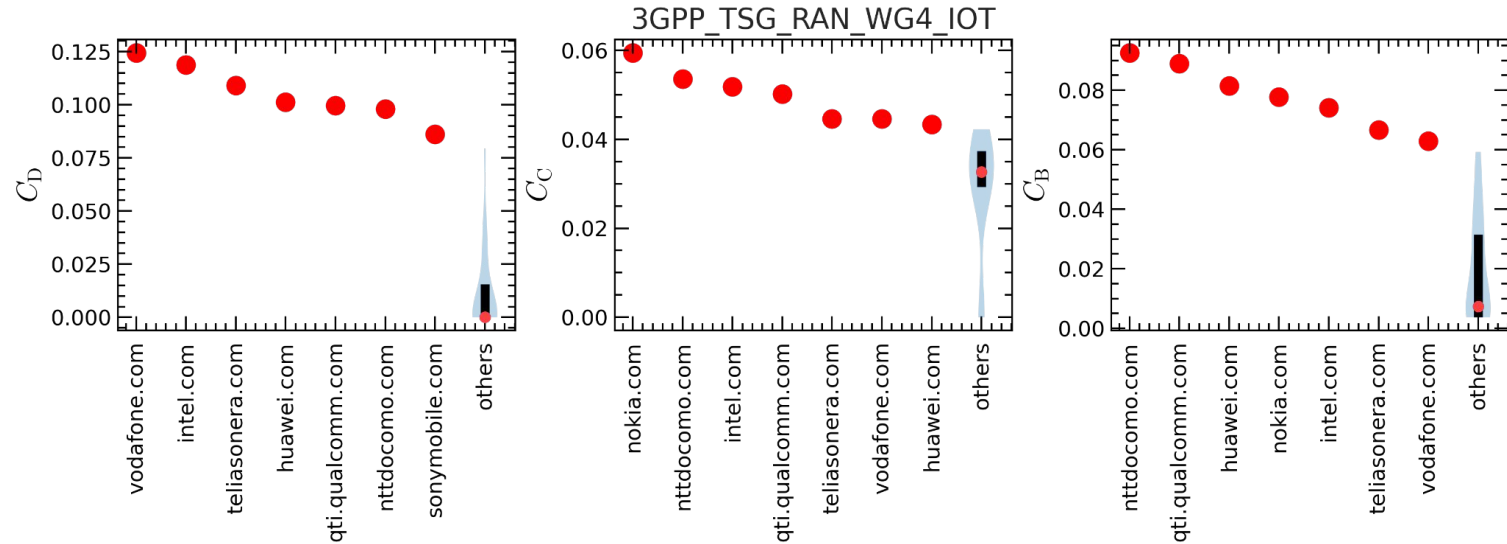


Started only one thread.



Deliberative Indicators

Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness



Deliberative Indicators

Part.-Rate, Activeness, Connectivity, Continuity, Uniformity, Responsiveness

