[1]	Security & Privacy											Compatibility										Features & Usability							Sustainability			
	Active [2]	TLS	Open Client	Open Server	On Premise	Anonymous [5]	E2E Private	E2E Group	E2E Default [6]	E2E Audit ran	FIDO1 / U2F	Desktop Web	Mobile Web	Android	Apple iOS	AOSP [9]	Win	macOS	Linux	*BSD	Terminal	MDM [3]	Offline Messages [10]	Local messaging [11]	File Share	Audio Call	Video Call	Phoneless [13]	Decentralized or Federated [4]	Open Spec	IETF [15]	Introduced
Riot/Matrix	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE [14]	2014
NextCloud Talk	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	2018
Wire	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	PARTIAL	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	2014
Jami	TRUE	TRUE	TRUE	N/A [16]	N/A	TRUE	TRUE	FALSE [17]	TRUE	FALSE	N/A [18]	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	ARTIAL [19	ARTIAL [20	2016
Briar [21]	TRUE	TRUE	TRUE	N/A [22]	N/A	TRUE	TRUE	TRUE	TRUE	TRUE	N/A [23]	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	2016
Tox	TRUE	TRUE	TRUE	N/A [24]	N/A	TRUE	TRUE	TRUE	TRUE	FALSE	N/A [25]	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE [26]	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	2013
Kontalk	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	PARTIAL	2014
DeltaChat	TRUE	TRUE	TRUE	TRUE [27]	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	PARTIAL	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	PARTIAL	2017
BitMessage	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	2014
Ricochet	TRUE [28]	TRUE	TRUE	N/A [29]	N/A	TRUE	TRUE	TRUE	TRUE	FALSE	N/A [30]	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	2016
PSYC-2	TRUE	TRUE	TRUE	N/A [31]	N/A	TRUE	TRUE	TRUE	TRUE	FALSE	N/A [32]	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	2013
Status.im	TRUE	TRUE	TRUE	N/A [33]	N/A	TRUE	TRUE	TRUE	TRUE	FALSE	N/A [34]	FALSE	FALSE	TRUE	TRUE		FALSE	TRUE	TRUE	FALSE			PARTIAL	FALSE				TRUE	TRUE		FALSE	2016
Rocketchat	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	PARTIAL [35]	ARTIAL [36	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE [37]	TRUE	FALSE	2015
IRC	TRUE	PARTIAL	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE [38]	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	1988
Mattermost	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	2016
Zulip	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE [39	TRUE	FALSE	FALSE	FALSE	2014
Orbit	TRUE	PARTIAL	TRUE	N/A [40]	N/A	TRUE	FALSE	FALSE	FALSE	FALSE	N/A [41]	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE		TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	2015
Mumble	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE		FALSE	TRUE	FALSE	TRUE	FALSE	TRUE	FALSE	2005
Spectrum	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	2011
Signal	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	RUE [42	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	2014
Semaphor	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	2016
Keybase	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE		TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	2017
Surespot	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE		TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	
Silence	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE		TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	
Telegram	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	PARTIAL	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	2013
SMS/MMS	TRUE	ROKEN [43	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	PARTIAL	
IMS/RCS	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE		TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	
Discord	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	2015
Gitter	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	
Duo	TRUE	LAIMED [4	FALSE	FALSE	FALSE	FALSE	CLAIMED [45]	LAIMED [4	CLAIMED [47]	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
Keeperchat	TRUE	LAIMED [4	FALSE	FALSE	FALSE	FALSE	CLAIMED [49]	LAIMED [5	CLAIMED [51]	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE		TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	2017
Wickr	TRUE	LAIMED [5	FALSE	FALSE	TRUE	FALSE	CLAIMED [53]	LAIMED [5	CLAIMED [55]	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE		TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
Threema	TRUE	LAIMED [5	FALSE	FALSE	FALSE	TRUE [57]	CLAIMED [58]	LAIMED [5	CLAIMED [60]	TRUE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE [61]	TRUE		TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	2012
Whatsapp	TRUE	LAIMED [6	FALSE	FALSE	FALSE	FALSE	CLAIMED [63]	LAIMED [6	CLAIMED [65]	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	2009
iMessage	TRUE	LAIMED [6	FALSE	FALSE	FALSE	FALSE	CLAIMED [67]	LAIMED [6	CLAIMED [69]	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE		TRUE	FALSE	FALSE	FALSE [70]	FALSE	FALSE	FALSE	
MS Teams	TRUE	LAIMED [7	FALSE	FALSE	TRUE [72]	TRUE	CLAIMED [73]	LAIMED [7	CLAIMED [75]	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	[80]
Facetime	TRUE	LAIMED [7	FALSE	FALSE	FALSE	FALSE	CLAIMED [77]	LAIMED [7	CLAIMED [79]	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
Line	TRUE	LAIMED [8	FALSE	FALSE	FALSE	FALSE	CLAIMED [82]	LAIMED [8	CLAIMED [84]	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
Viber	TRUE	LAIMED [8	FALSE	FALSE	FALSE	FALSE	CLAIMED [86]	LAIMED [8	CLAIMED [88]	FALSE	FALSE			TRUE	TRUE		TRUE	TRUE			FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	2010
Facebook	TRUE	LAIMED [8	FALSE	FALSE	FALSE	FALSE	CLAIMED [90]	LAIMED [9	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
Skype	TRUE	LAIMED [9	FALSE	FALSE	FALSE	FALSE	CLAIMED [93]	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
Kakaotalk	TRUE	LAIMED [9	FALSE	FALSE	FALSE	FALSE	CLAIMED [95]	FALSE	FALSE	FALSE	FALSE			TRUE	TRUE		TRUE	TRUE			FALSE	TRUE	TRUE	FALSE	TRUE	TRUE			FALSE	FALSE	FALSE	
Hangouts	TRUE	LAIMED [9	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
Zoom	TRUE	LAIMED [9	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
Slack	TRUE	LAIMED [9	FALSE	FALSE	FALSE	FALSE	FALSE [99]	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
Reddit Chat	TRUE	LAIMED [10	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	
Twitch	TRUE	LAIMED [10	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	
Instagram	TRUE	LAIMED [10	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
Snapchat	TRUE	LAIMED [10	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	
Steam	TRUE	LAIMED [10	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE		FALSE	TRUE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	
WeChat	TRUE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE		TRUE	TRUE		TRUE	TRUE	TRUE			TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	2011
Kik	TRUE	LAIMED [10	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE			TRUE							FALSE	TRUE	TRUE	FALSE	TRUE				FALSE	FALSE	FALSE	
BBM	TRUE	LAIMED [10	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE										FALSE	TRUE	TRUE						FALSE	FALSE	FALSE	
IMO	TRUE	LAIMED [10	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	TRUE	TRUE						FALSE	FALSE	FALSE	
QQ	TRUE		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE		TRUE	TRUE		TRUE	TRUE	ALSE [108]		FALSE	TRUE	TRUE		TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	1999
Zalo	TRUE	LAIMED [10	FALSE	FALSE						FALSE	FALSE	TRUE		TRUE	TRUE						FALSE	TRUE				TRUE	TRUE				FALSE	
Tango	TRUE		FALSE	FALSE	FALSE					FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE			TRUE	TRUE	TRUE					
Tuenti	TRUE		FALSE	FALSE	FALSE					FALSE	FALSE	TRUE		TRUE	TRUE						FALSE	TRUE				TRUE			FALSE	FALSE	FALSE	
ICQ	TRUE	LAIMED [110]								FALSE	FALSE						TRUE				TRUE	TRUE							FALSE		FALSE	
Gadu Gadu	TRUE	LAIMED [11	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE			TRUE	TRUE		TRUE	TRUE	TRUE		FALSE	TRUE	TRUE		TRUE	TRUE				FALSE	FALSE	FALSE	2000
stealthy.im	TRUE													TRUE	TRUE																	
Fortknoxster	TRUE		FALSE	FALSE	FALSE	FALSE						TRUE		TRUE	TRUE																FALSE	2018
Crypviser	TRUE											FALSE	FALSE	TRUE	TRUE		FALSE	FALSE	FALSE	FALSE	FALSE										FALSE	2018
Tungsten	TRUE					FALSE						FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE										FALSE	2018
ŏ	TRUE	TRUE	TRUE	N/A [114]	N/A	TRUE	TRUE	TRUE	TRUE	FALSE	N/A [118]	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE				TRUE	TRUE			2019
Allo	ALSE [112	AIMED [11	FALSE	FALSE	FALSE	FALSE	LAIMED [115	AIMED [11	FALSE [117]	FALSE	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	
Pond	FALSE		TRUE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE				FALSE	FALSE	FALSE		FALSE	TRUE	FALSE	
SILC	FALSE		TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	
PSYC-1	ALSE [119]		TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE		TRUE		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	2000

[1]	Security & Privacy											Compatibility										Features & Usability								Sustainability			
	Active [2]	TLS	Open Client	Open Server	On Premise	Anonymous [5]	E2E Private	E2E Group	E2E Default [6]	E2E Auditable	FIDO1 / U2F	Desktop Web	Mobile Web	Android	Apple iOS	AOSP [9]	Win	macOS	Linux	*BSD	Terminal	MDM [3]	Offline Messages [10]	Local messaging [11]	File Share	Audio Call	Video Call	Phoneless [13]	Decentralized or Federated [4]	Open Spec	IETF [15]	Introduced
Zephyr	FALSE		TRUE							FALSE	FALSE										FALSE											
AIM	FALSE	AIMED [120]		FALSE			FALSE	FALSE	FALSE	FALSE	FALSE						TRUE				TRUE							FALSE		FALSE	
MSN	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE						TRUE				TRUE						TRUE	FALSE		FALSE	
Yahoo	FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE										TRUE						TRUE	FALSE		FALSE	
ooVoo	FALSE									FALSE	FALSE										FALSE										
Echo	ALSE? [121]					TRUE				FALSE	FALSE										FALSE						TRUE	TRUE			
cfc.io																															
vero																															
tinode																															
Dust [122]														TRUE	TRUE																
[123]																															
[124]		Feel free to comment on cells to suggest updates, or better yet move all this somewhere better like Wikipedia																													
[125]		If you like this type of research and want to learn more about security, privacy, or self-hosting check out:													https://hashbang.sh																
[126]	[129]	[127]	[131]	[133]	[134]	[135]	[136]	[137]	[138]	[139]	[140]	[141]	[142]	[143]	[128]	[144]	[145]	[146]	[147]	[148]	[149]	[150]	[151]	[152]	[153]	[154]	[155]	[156]	[157]	[158]	[159]	[160]
[130]		[132]																														
[161]																																
[162]																																

[1] Linephone. http://www.linphone.org
Recommended by privacytools.io
    -Waddah Abu-Hmida

Should there be a "Security Breachs" or "incidents" column stating the number and perhaps links to recent known hacks of the app and its data servers?
    -Waddah Abu-Hmida
Would CVEs also be considered in this criteria?
    -Анонимен потребител

[2] The creators of the app/protocol are continuing development/support of it.
For Open Source projects: has had a commit in the last year.

[5] If a phone number or other permanent-ish identifier is not required for using the platform

[6] Are all chats end-to-end encrypted by default?

[8] Has there been a third party audit on the overall end to end encryption protocol by a well known security research firm or academic institution.

[9] This means there is an open source signed package available to a package manager that works on phones without Google Play. e.g. a reproducible F-Droid release.

[3] Multi-device messaging: More than one device can be directly connected to a given account at the same time

[10] If the receiving party does not have the client open; can you send them a message?

[11] Is there a mode of messaging that doesn't require an IP connection?
e.g. over LAN, Bluetooth, etc.

[13] Do you need an actual phone to use the software? e.g. do you need to receive an SMS to sign up?

I'd like to see a section for clients / client features. I realize this document is centered around the protocols, but when moving large teams to a different protocol, client UI is also a crucial concern. It would be nice to see some Slack-like features compared, e.g. channels, threads, reply-depth, bots, search, markdown, etc.
    -Spencer Flagg
+1 Strongly agree. Maybe in a second sheet?
    -Oskar
👍👍
    -Spencer Flagg
I would support columns to cover a given feature as long as you are going to do the research for that feature for say the top 50+ messengers.

--
Sent from my Android device with K-9 Mail. Please excuse my brevity.
-Lance Vick

[4] Multiple people can run their own servers and communicate between them. E-mail is an example of a federated network where gmail users can communicate with fastmail users

[15] Is the protocol documented in a published IETF or other international standards body document?
Usually this column is "Does an RFC exist for the protocol"

[14] The link is broken. This one might serve as replacement, though! :)
https://matrix.org/faq/#why-aren't-you-doing-this-through-the-ietf%3F-or-w3c%3F-or-3gpp%3F
-Félix Fischer

[7] Depends on the client. Some make E2E the default; others don't.

[12] https://xmpp.org/extensions/xep-0174.html allows for local messaging but it's still over IP

[16] Actually serverless, but we default to the happy state for that.

[17] No group chat support yet
https://git.jami.net/savoirfairelinux/ring-project/wikis/Group-chat-feature-(design-draft)

[18] Serverless

[19] Ring is a set of open specs glued together. Some of the ways they are connected together are under-spec'd

[20] SIP based but lots more non-standard on top

[21] Currently has NO support for connecting 2 people who aren't in Bluetooth range.

[22] Actually serverless, but we default to the happy state for that.

[23] Serverless

[24] Actually serverless, but we default to the happy state for that.

[25] Serverless

[26] https://wiki.tox.chat/users/offline_messaging

[27] Actually uses email servers.

[28] https://git.openprivacy.ca/openprivacy/libricochet-go

[29] Actually serverless, but we default to the happy state for that.

[30] Serverless

[31] Actually serverless but we default to the happy state for that

[32] Serverless

[33] Actually serverless, but we default to the happy state for that.

[34] Serverless

[35] Since 0.70.0
Not yet available in mobile app

[36] Since 0.70.0
Not yet available in mobile app

[37] This is actually true. https://rocket.chat/docs/administrator-guides/federation/#federation
    -Aaron Ogle

Fedoration is currently in beta but is still functional.
https://rocket.chat/docs/administrator-guides/federation/
    -Анонимен потребител

[38] IRC has DCC which can operate without a server
    -Matthew Brooks

[39] Via jitsi meet. See https://zulipchat.com/help/start-a-call

[40] Actually serverless, but we default to the happy state for that.

[41] Serverless

[42] There is also an earlier audit: https://eprint.iacr.org/2014/904.pdf

[43] In the US 2G downgrade requests must be honored which uses A5/1 encryption which has rainbow tables for the entire keyspace this fit in 2TB.

[44] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[45] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[46] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[47] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[48] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[49] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[50] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[51] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[52] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[53] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[54] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[55] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[56] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[57] Threema sends (if activated) the hashed phone numbers from your contact list to the threema servers.

Source: https://threema.ch/press-files/2_documentation/cryptography_whitepaper.pdf

If you know enough people, who activated this feature, Threema can deduce the connection from phone number to Threema ID with a certain propability. They claim they don't do this, but there's no guarantee.

Edit: Calculating the inverse of a hashed phone number is easy. Threema even acknowledges it in their white paper.
-Hal dan

[58] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[59] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[60] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[61] Not possible. Just possible via Threema Web. - But this possibility is not accounted on Whatsapp although its analog to Threema in that way.
-siteking
https://threema.ch/en/faq/multidevice
-siteking

[62] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[63] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[64] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[65] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[66] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[67] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[68] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[69] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[70] Should be 'TRUE' as you don't need to have it installed on the iPhone to work.
-Siminiuc Sergiu
As far as I know you can't use it without owning a phone?
-Quae Quack

[71] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[72] Are you sure, that MS Teams is on premise?
-Анонимен потребител

[73] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[74] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[75] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[80] 2017
-Oskar

[76] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[77] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[78] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[79] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[81] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[82] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[83] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[84] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

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[97] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[98] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[99] Can be gained by Shhhhlack plugin
-Jayson Quayle

[100] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[101] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[102] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[103] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[104] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[105] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[106] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[107] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[108] Actually TRUE. https://im.qq.com/linuxqq/index.html
-im gg

[109] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[110] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[111] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[114] Actually serverless, but we default to the happy state for that.

[118] Serverless

[112] https://www.blog.google/products/messages/latest-messages-allo-duo-and-hangouts/

[113] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[115] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[116] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[117] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[119] From https://about.psyc.eu/#Stay_in_touch
> There is no active development of the old federation PSYC1 technology, just maintenance.

[120] Not possible to verify as application is closed source. Maintainer could compromise security at any time without detection.

[121] Seems to have one active implementation. But author is of questionable sanity

[122] Recommend you add Dust. https://www.usedust.com/
    -Tanner Williamson
Heavily encrypted and 128-bit AES + 2048-bit RSA don't really go hand in hand. Looks like another generic proprietary messaging app with rudimentary, 90's era hybrid cryptosystem. Nothing stands out except the sprinke of magical crypto dust of "data living in the RAM".

Explaining how generic public key encryption works in the https://www.usedust.com/encryption-model indicates the developers are really excited about their accumulated knowledge about the basics of cryptography, which usually indicates the developers have finally reached the peak of Mount Stupid in the Dunning-Kruger graph.
    -maqp
Please provide us with information about the application. I'm not finding much info on it and don't feel like installing it on my phone to find out myself.
    -Quae Quack

[123] What about Rainbows (alcatel)?
    -Julian Fernandez
I'd also like to see entries for Secure Scuttlebutt http://scuttlebutt.nz and also for ZeroMQ http://zeromq.org
    -Darrell - Crypto UBI

[124] https://cwtch.im should be added :)
    -Franco Cimatti

[125] What about Confide?
    -Spencer Flagg

[126] Secure Scuttlebutt
    -Devon Bush

[129] TRUE
    -Devon Bush

[127] Not Sure
    -Devon Bush

[131] TRUE
-Devon Bush

[133] N/A
Has 'pubs', but these are not necessary for the network to run.
-Devon Bush

[134] N/A
-Devon Bush

[135] TRUE
-Devon Bush

[136] TRUE
-Devon Bush

[137] TRUE
-Devon Bush

[138] TRUE
-Devon Bush

[139] FALSE
-Devon Bush

[140] N/A
Serverless
-Devon Bush

[141] FALSE
While firefox supports the ssb protocol and there is an addon, it requires software running in the background.
-Devon Bush

[142] FALSE
-Devon Bush

[143] TRUE
Manyverse
-Devon Bush

[128] FALSE
-Devon Bush

[144] TRUE
-Devon Bush

[145] TRUE
-Devon Bush

[146] TRUE
-Devon Bush

[147] TRUE
-Devon Bush

[148] FALSE
-Devon Bush

[149] FALSE
-Devon Bush

[150] FALSE
In development. Has bounty.
-Devon Bush

[151] TRUE
-Devon Bush

[152] TRUE
-Devon Bush

[153] TRUE
-Devon Bush

[154] FALSE
-Devon Bush

[155] FALSE
-Devon Bush

[156] TRUE
-Devon Bush

[157] TRUE
-Devon Bush

[158] TRUE
Public Domain
-Devon Bush

[159] FALSE
-Devon Bush

[160] 2014
-Devon Bush

[130] openfire https://igniterealtime.org/index.jsp
-Matt Axsom

[132] TRUE and FALSE values are being translated to other languages (probably based on geoip location), which I don't like. Maybe change them to Unicode check/cross marks (✓ ✗)?
-Анонимен потребител

[161] Symphony https://symphony.com/
-Matt Axsom

[162] https://www.linphone.org
-Nicolas POUGNEAUD
This one too : https://loki.foundation/session/ too (I can't add more below)
-Анонимен потребител