Delta Chat
UX and Needfinding
Final report

OTF Usability and Robustness project
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Gaming with Decentralization

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Introduction

This report is a result of one-year collaborative work of the Delta Chat UX and development team, together with numerous partners from other free software projects focused on decentralization and privacy-enhancing technologies, as well as from local communities of activists, journalists, designers and artists who contributed their time and energy to develop visions for a decentralized messaging ecosystem beyond the "always online" paradigm.

During this year, Delta Chat has evolved and gathered attention from thousands of users across the world from Cuba to Ukraine. Now, even more than before, we have come to an understanding of our role not as "one app to replace them all," but rather as a complementary tool that offers modularity (thanks to its federated nature and the evolving bot ecosystem) and can be freely adapted to community-specific needs.

This report aims at giving an account of a one-year experiment that Delta Chat engaged with Ukrainian users: journalists, civic activists and digital security trainers. We have chosen Ukraine as our first testing base because this country is currently experiencing an intense economic and political transition, with a remarkably active civil society, an open and dynamic market of Internet service providers (more than 3000) and ongoing armed conflicts which foster the need for asymmetric security for reporters and human rights observers. Our vision of what threat models exist and how Delta Chat should respond to these challenges has evolved, thanks to our constant exchange with activists involved in documentation of war crimes or human rights violations in the country.

This report givesan overview of these multiple ongoing collaborations between development and collective deliberation and action. It brought us to forge specific scenarios, such as the asymmetric organizational "basecamp" use-case, and focus on a set of functionalities, such as on-demand secure location streaming. Further tests and exchanges then brought us to imagine deployment of bot ecosystems and burner accounts, while our communication with our users and contributors from Cuba has brought us to focus on storage and data saving solutions for Cuba-specific needs.

This report is structured as follows: first of all, we will describe the overall situation with messaging and email apps in Ukraine, including challenges and unfulfilled needs of targeted users like journalists and activists. We will also briefly describe the situation with Cuban users and their current creative patterns of using email for practically everything. Secondly, the report will describe the Delta Chat effort, its reception by target communities and the results of the two user-testing sessions and our testing game that took place in Kyiv in April 2019. Finally, it will sketch a Delta Chat-specific strategy for further improvement. We hope that this report will be

useful for other secure messaging projects as well as for UX researchers.

Messaging and email apps usage in Ukrainian civil society: an overview

Recent political events in Ukraine, such as the Maidan revolution, war and occupation of approximately 7% of Ukrainian territory, have created a strong need for field missions to monitor human rights violations in conflict zones. Conflict areas (for example Crimea or the region of Donetsk) differ significantly from the rest of the country in terms of risks for journalists and human rights defenders who cover the events in these regions. With a very high Internet penetration and a vibrant developer and ISP community, Ukrainian journalists and human rights defenders rely heavily on digital communication not only to disseminate the results of their work, but also to organize the inner workflows between the more secure "head office" (or "basecamp", as we call it), and mobile observers in the field. This "asymmetric scenario" presents many new threats and risks that differ from situations currently covered by centralized messaging app solutions that presume everyone is working in the same level of risk.

Journalistic and NGO communities in Ukraine are actively learning most recent "best practices" of digital and operational security, thanks to a few international and Ukrainian organizations specializing in digital security trainings However, while some needs of these user groups are being relatively successfully covered by an existing set of tools, we've observed a few scenarios where most of the messaging and email client solutions seem to fail – namely, what we now call the "asymmetric scenario". This lead us to develop the Delta Chat desktop application, which can be used in office-like environments, that are somewhat often considered as safer.

To better understand this peculiar Ukrainian context and evaluate Delta Chat's perspectives for further development together with users in the Ukraine and beyond, we decided to design a needfinding study. Our main research questions included understanding the current workflows of targeted users working in a multi-tool context; their practices for "identity management" and their needs for anonymity; their perceptions of risk, security and privacy, as well as their overall feelings (from satisfaction to frustration) about the so-called "secure messaging tools".

In our research and work, we perceive users not as passive consumers of a tool, but as active contributors, who can shape further developments. That is why we decided to select a few sub-groups of users (NGO activists, journalists and digital security trainers), who experience real threats in their work. Some of these users have become our long-term contributors by further engaging in user-tests, attending our events or becoming our regular consultants (as, for example, Eugeniya from the ADB Memorial, former member of the Center for Information on Human Rights).
Based on interviews with these users, we have published a needfinding report (https://delta.chat/en/2018-12-19-needfinding). In this report we have covered our main findings, from choice of device, operating system, instant messaging or email client, to multimedia file management workflows, identity management, verification and privacy practices. Here we will

just summarize a few takeaways that helped guide our developments during the last year and inspired some of the further directions.

First of all, we have seen an overwhelming diversity in terms of tools and operating systems people use in their work and activism-related activities. iOS in general is quite popular and is somehow preferred for security, while Android phones are more often used as a cheap throw-away "mission phones". The popularity of iOS in Ukraine motivated us to work harder on a well-functioning iOS version of Delta Chat, scheduled for the second half of 2019.

We were pleased to find that email was far from being dead in Ukraine and was still quite popular with both journalists and activists. We observed a difference in how people perceived "email" vs "instant messaging". We further explored this difference in perceptions by conducting a special drawing workshop (see further in the dedicated section) but we summarize the key takeaways here.

Firstly, according to our expectations, email is more heavily used for formal communications, particularly for the sending and receiving of official documents. Secondly, email is perceived as safer for account creation compared to phone numbers. While useful for easy contact discovery, many users are both aware of, and uncomfortable with, the risks associated with mobile phone networks usage (for example, location monitoring and association of instant messaging account with their primary phone number).

The management of documents, photos, videos and other attachments happened both through emails and messengers, users generally criticized most of the secure messengers for their unusable search and document management (with the exception of Facebook Messenger, which was surprisingly praised for how it deals with multimedia). On the contrary, email was perceived as a more reliable and a better searchable storage for important documents and files.

We found many users send a high volume of emails with attachments during a short period of time. This, as well as peculiar file-management practices such as sharing documents through encrypted messengers and transferring them to a laptop or desktop to work with, suggests a strong need for built-in features for file management. It includes features such as bulk file upload/download, file and link previews, searching/filtering by name and file types and so on. This lead us to improve the way Delta Chat is organizing the workflow with multimedia attachments and contacts, both on mobile and desktop versions.
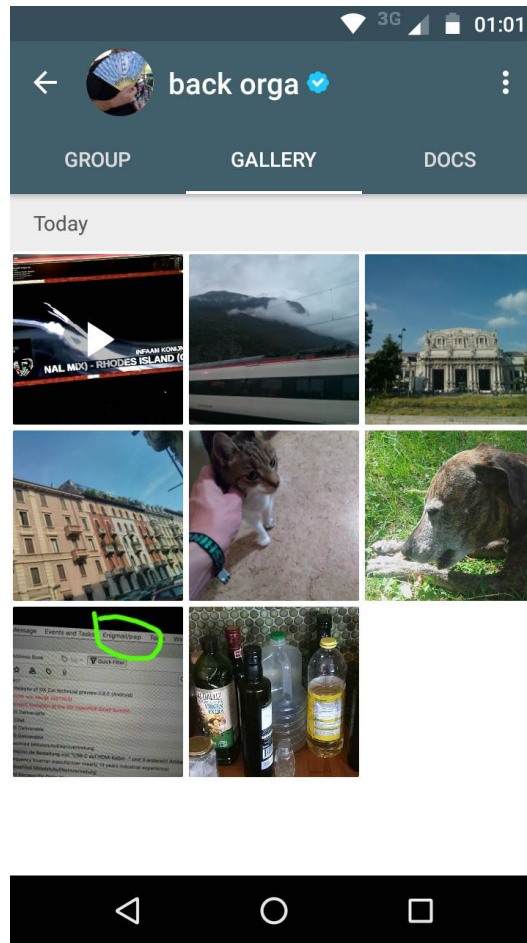
Screenshot 1: Delta Chat's 0.500.0 group management (search by contacts, gallery and documents).

Interestingly, for most interviewees "privacy" was not an issue in itself, and Ukrainians tended to trust services such as Gmail or Facebook, based either on their "transparency reports" or the assumption that those actors are outside their usual threat model. The popularity of Gmail among Ukrainian users , led us improve Delta Chat's Gmail support by introducing "Simplified Setup" using OAUTH2 early in 2019.

In terms of popularity and usage of instant messaging apss, and due to the local context, Facebook Messenger was listed as the most popular social media app used in Ukraine, mainly because it has a strong network effect . In this sense, Delta Chat's usage of the email protocol helps break the messaging "silos" as it becomes immediately possible for a Delta Chat users to communicate with any of the billions of users of the biggest communication infrastructure ever.

Interestingly, Facebook Messenger was also used as a "social verification" tool by journalists and activists who needed to find a source and confirm the authenticity of the source by looking

at their social graph. The two next most-used apps mentioned in the interviews were WhatsApp and Telegram. Both are perceived as "more secure" than Facebook Messenger and are chosen for conversations that need more "protection". Moreover, Telegram offered a few other interesting features, such as 'channels' (one-to-many publishing / broadcasting), a bot ecosystem, and image compression which is very important for journalists and observers.

Other highly valued features of different messaging platforms included disappearing messages or remote deletion, contact requests approval and the ability to have aliases or easily create short-lived ephemeral accounts. Finally, it is worth mentioning that high-risk users have developed a habit of checking and adjusting their default settings. This includes setting up two factor authentication (2FA), changes in notifications and back-up functionality. This gives Delta Chat some flexibility for hiding advanced features behind menus in the app and suggesting various combinations of "defaults" to choose from, depending on perceived risk levels (see further developments on this in the second round of UX tests).

Our findings call for uniform design and feature implementation on desktop and mobile devices, to minimize the learning effort for using Delta Chat. The multi-tool usage patterns and compartmentalization practices show that users are not searching for a "perfect app" that would "solve all their problems", but are used to switching between various tools for various contexts and features. This gives room for Delta Chat integration within the user workflow, without an ambition to "replace" other tools.

We therefore think that the multi-tool context is not an obstacle, but rather a resource. By thinking together with users who are used to communicating within a multi-app and multi-device environment, we have learned to progressively evolve the set of features. Among them: evolving bot ecosystems (that will give the ability to create broadcasting-like channels and much more), improving attachment/file management/group management, including video recordings and recoding as compressed file formats, introducing "burner accounts" or "one-sided deletion", and other features further discussed in this report.

UX tests first round: key takeaways

The first round of Delta Chat user-testing took place in Kyiv on October 30 and 31, 2018 and included 12 testers, 10 coming from journalistic and NGO activist user-groups, and 2 being local tech enthusiasts, though not specialists in secure messaging or cryptography.

Guided by our needfinding results and conversations with developer team, we first designed our user-testing tables, that featured 4 big tasks with smaller step-by-step actions for users to follow, and a series of reactions to choose from. We picked 5 basic emojis, from very happy to angry, as well as offering "no answer" when users preferred to skip emotional reactions.

We were aiming to check user experience for the account creation and basic onboarding process, using group chats, verification process and usage of verified groups, and finally backups and key import/export.

While overall the Delta Chat Android app has proven itself to be quite usable, some of its features require better explanation. Wording stays one of the most important aspects to work on. Our tests and more general research on a secure messaging show that users' behaviour has been quite deeply influenced by the most popular apps, such as Signal, WhatsApp and Facebook Messenger. Many of the expectations for Delta Chat usability come from these patterns, and while some of them should be progressively modified (towards building better UX/UI paths for decentralized tools), others should be met, at least for the nearest future.

For example, users expressed concerns about "permissions" and access of DeltaChat to their contact lists, gallery, camera and so on. Emphasizing Delta Chat's decentralized nature (e.g. explaining that the app does not store anything on a centralized Delta Chat server) may be a good way to overcome these concerns. Recent releases have improved wording before the system asks for permissions and most questions are now asked right when one wants to use a resource like the camera.

It should be mentioned that some core elements of UI - especially account creation - were a significant burden to overcome for users and need a significant rework in terms of user experience. One aspect related to this is the "real password". Testers were confused about providing Delta Chat with their real email password - behaviour they were constantly warned against in their online experience. This is a significant problem which may be tackled with a better explanation of Delta Chat's core features and especially it's decentralized nature. It should be mentioned that this problem is tackled in later releases with the introduction of OAuth functionality for Gmail users (a well-recognized behaviour), but it still remains a problem for owners of accounts with smaller email providers. This has been mitigated by additional explanations, additionally there is now a plan to incorporate hints and links for each specific provider, contributed by the community.

The app's "contact" management was another challenge for users that we recommend to work on. There is a certain user reaction pattern that we call "fear of the contact book": it is a concern expressed by many users who do not want to merge their Delta Chat app-specific contacts with their phone address book. More visibility in the Delta Chat and phone contact book interaction may help, as well as some visual manifestation of how contact was added (e.g. "phone address book", "directly added" or "introduced as a member of a group").

We recommended providing a simpler and shorter path to add and delete a contact, as well as an easy way to switch between group chats and one-to-one chats - something many testers were confused and concerned about. This was addressed in subsequent Android releases, eg. by the "chats shared with a given contact" view.

The verification process and verified groups posed another challenge for Delta Chat usability. There was a lot of confusion around the meaning of "verification" as well as about the verification process itself. It appears that users understand verification as a social event, not as a device or account verification in itself.Adding more visual/graphic elements can help with a better explanation of the "verification" process and its features. For example change in colour scheme or introducing specific background within a verified group may help to distinguish it from the regular group chats.

Finally, backup and key import/export functionality in its October 2018 form was far from obvious to users. The June 2019 releases allow to export and import backups in the "Chat and Media" section of the settings which makes using it more obvious.

Our full version of the first UX-testing report can be [downloaded and read here](#).

UX tests - second round: wordings and visualizations

After the first round of tests we understood that, while the UX/UI has been steadily improving, major difficulties were hiding behind "words" and "images". We've connected with Eileen from Simply Secure and had several discussions about improving our FAQ as well as the overall user-facing vocabulary. We tried to find ways to talk with users through insightful drawings in order to convey them towards a better understanding of such hard to grasp concepts as key exchange, decentralization, SIM-less and serverless nature of Delta Chat's architecture.

With Janka from the Delta Chat team we have come up with several drawing ideas, some of which are implemented in our FAQ section.
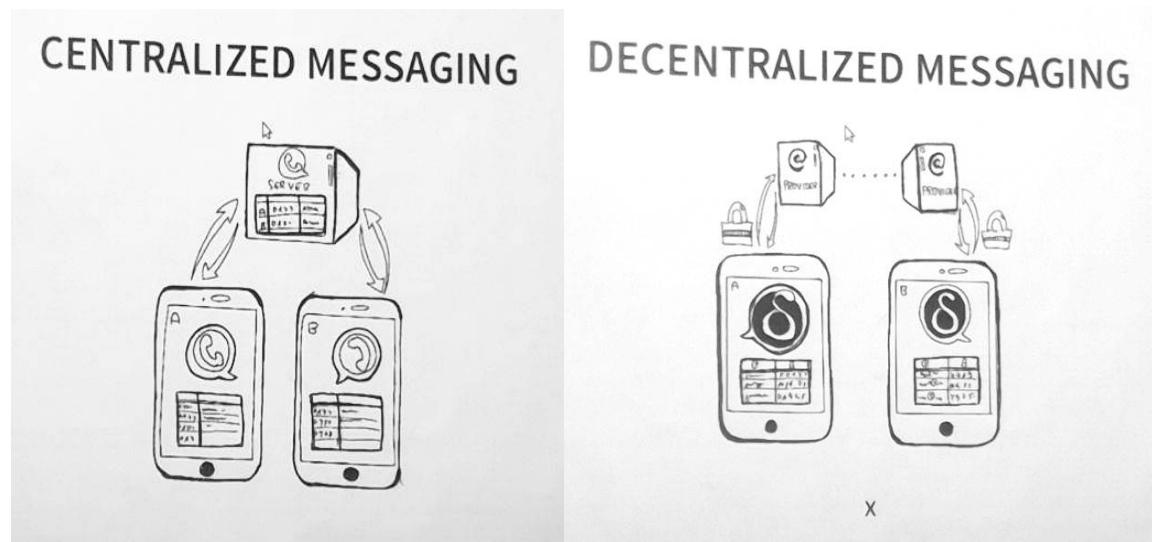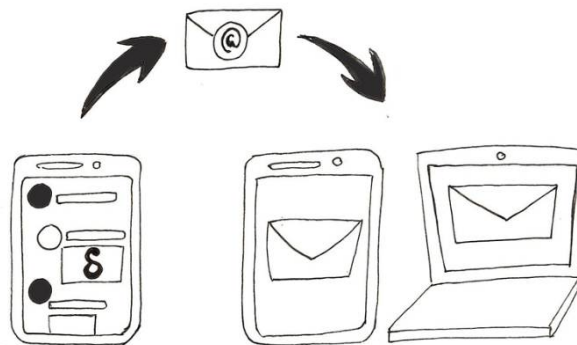
Our second round of UX tests included a part focused on wordings and visualizations. First, we showed a short comic that meant to explain the key exchange and interoperability of Delta Chat, however we did not give any explanations to users. We gave them about 3 minutes to look at the comics and think what it tries to explain and what different characters on the picture are doing. Afterwards each gave us a 2-minute feedback, first telling their interpretation and then asking us questions about the elements on the drawing that were unclear.
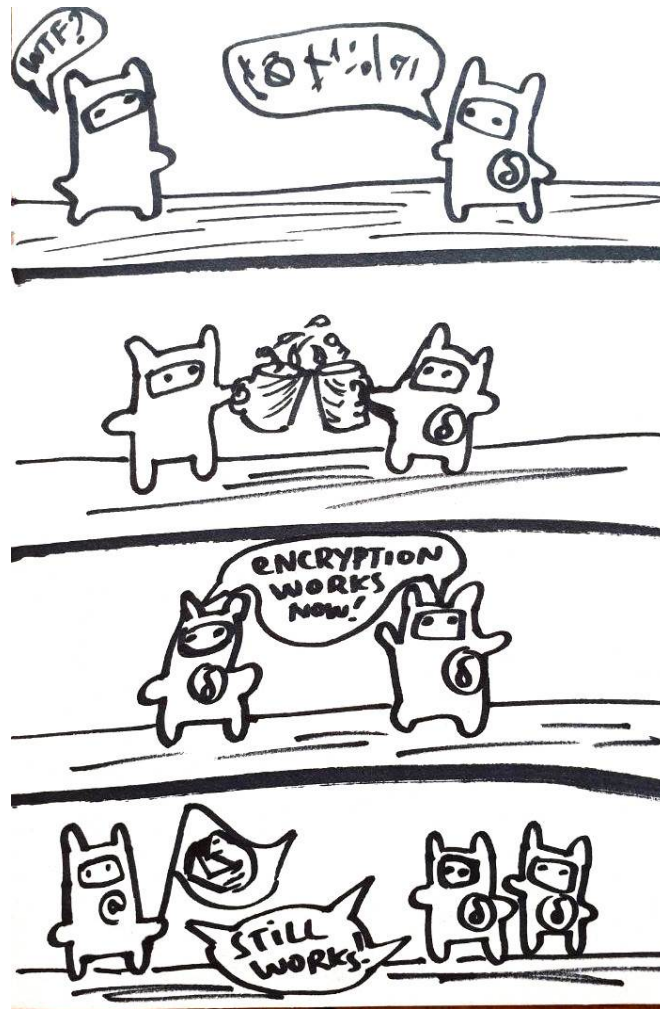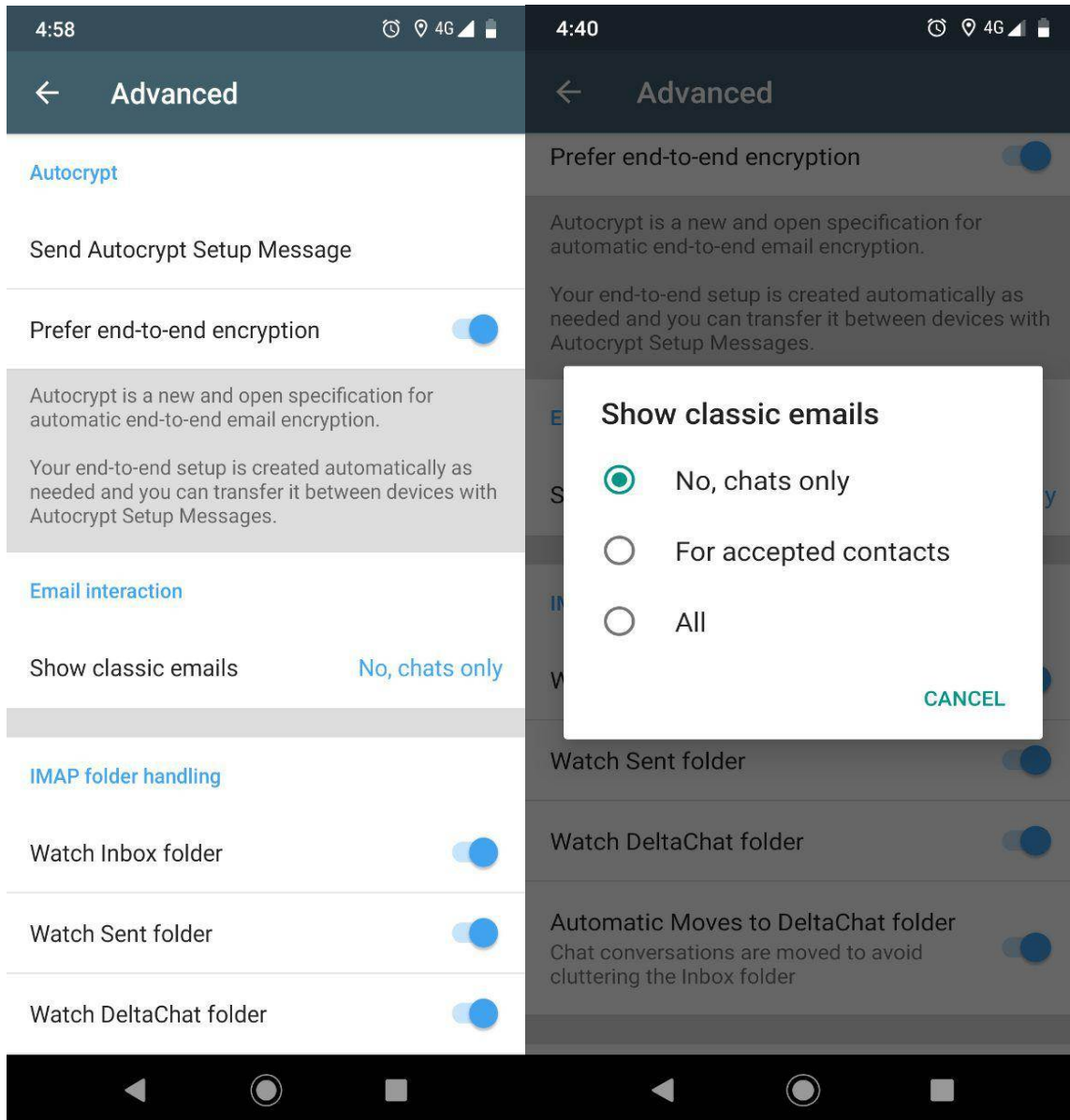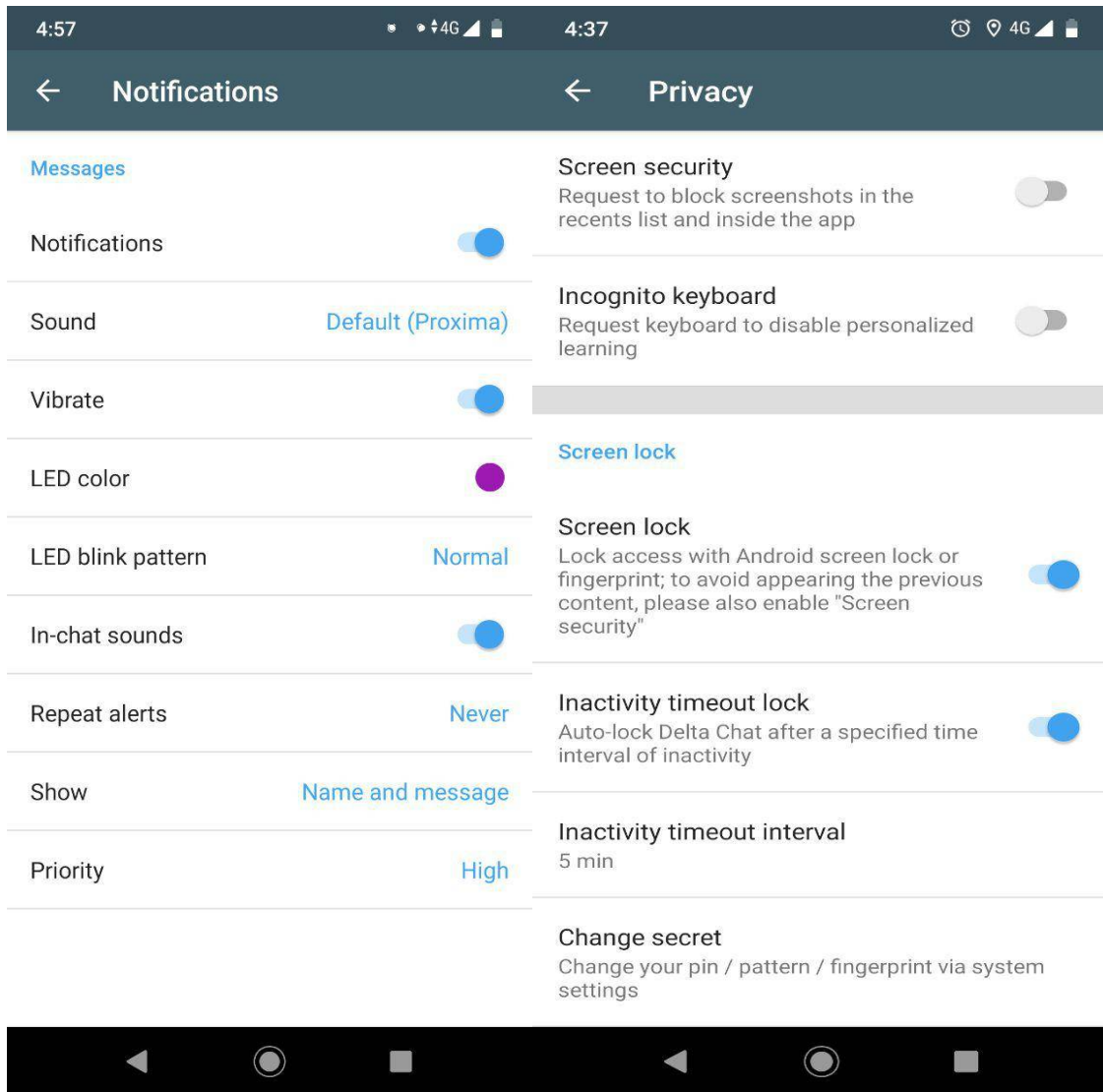

Firstly confusion was detected already in the upper part of the comics: people thought that the very first message was already encrypted (because of the "weird characters"), We will have to change this first phrase to a "clear text" sentence saying something like "hey, let's party".

Secondly, folks who were not drinking did not understand the metaphor of clinking glasses together,others however, liked this metaphor a lot. One tester said "W*hen I come to Scotland I first feel that I do not understand their English, but after the first whiskey I understand everything*". We are considering to make an alternative second comics without the "drinking" metaphor, however overall this was well received.
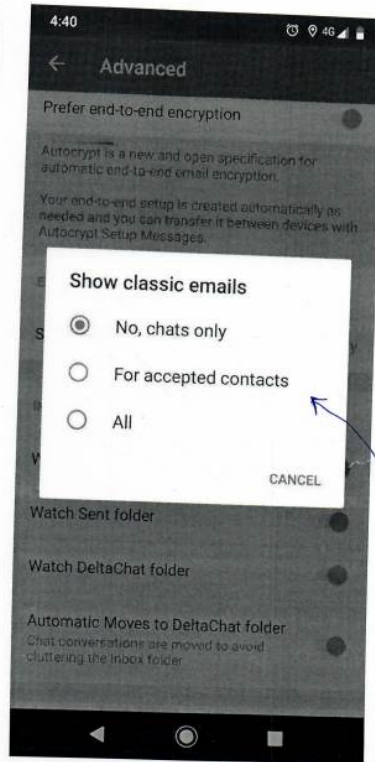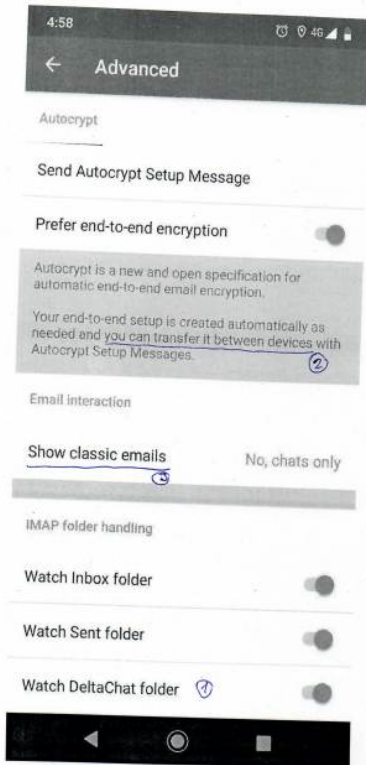
The very last picture was not well understood, mainly because of the quality of the printed comics -- only a few testers understood that it was a "Thunderbird" logo. They suggested to rather put the "@" symbol to show that it was possible to communicate between Delta Chat and email. However a few users intuitively grasped that different flags were symbolizing "friendship between Delta Chat and email", and "different communities which can connect easily".

Next phase of the UX test was focused on wording within Delta Chat app. We showed several screenshots from the Delta Chat app and gave users 3 minutes to carefully look at them and tell us what they saw and what was hard to understand.

Notifications screen

4:57 4G

← Notifications

Messages

Notifications 🔵

Sound — Default (Proxima)

Vibrate 🔵

LED color 🟣

LED blink pattern — Normal

In-chat sounds 🔵

Repeat alerts — Never

Show — Name and message

Priority — High

Privacy screen

4:37 4G

← Privacy

Screen security
Request to block screenshots in the recents list and inside the app

Incognito keyboard
Request keyboard to disable personalized learning

Screen lock

Screen lock
Lock access with Android screen lock or fingerprint; to avoid appearing the previous content, please also enable "Screen security" 🔵

Inactivity timeout lock
Auto-lock Delta Chat after a specified time interval of inactivity 🔵

Inactivity timeout interval
5 min

Change secret
Change your pin / pattern / fingerprint via system settings

In general, privacy and notification settings were rather clear to the users, whereas security / encryption related settings raised more questions. Users were generally confused about the meaning of "Screen lock → to avoid appearing previous content". People were also confused about the meaning of "Show classic emails" thinking that classic emails meant unencrypted emails. They also asked about the meaning of "Autocrypt setup message".

The two screenshots show Delta Chat "Advanced" settings screens with handwritten Russian annotations in the margins:

① • у δ какая-то отдельная папка? хмм…

② а если у другого устройства это не включено? что именно шифруется?

③ classic = unecryted? или разница в интерфейсе?

• а в чём разница?
• как это влияет на мой опыт?

User's comment on the screenshots:

To the left: "1) Does Delta Chat have a separate folder? Hmm… 2) What if the other device does not have it enabled? What is encrypted precisely? 3) Classic = unencrypted? Or is just the UI different?"
To the right: "What's the difference? How does this influence my experience?"

As for "Prefer end-to-end encryption" option, a few users compared it with "Telegram secret chats", e.g. enabling this option would provide them with more secure settings of Delta Chat. We then had a brief discussion with a few high-risk users who confessed that they would be interested in having a fast way to configure "top security" settings in the app for their field missions. This has lead to discussions with Holger, Eileen, Karissa and Björn about "default preset profiles" (described further in this report).

As for notifications, users requested ability to better customize per-chat notifications (disable or enable for particular chats, and not for the app in general).

The second part of the UX test was focused on completing several sets of tasks. We asked testers to comment on each task and fill in the "emoji" rating, as well as leave a short written feedback.

The tasks were grouped as follows :

- Account Creation and Onboarding

- Group chat creation and group management

- Verified groups and verified group management

- Location streaming

As for onboarding, users were still confused with the fact they needed to use their "real email and password". Many of them requested to have a "sign up" button on the first screen. Some also confessed they did not remember their passwords (as they were using password managers) and would like to have a "reset password" button somewhere. Some also disliked the "plus" button (as it reminded them of Viber). Regarding image creation and transfer, users did not like the frontal camera mode by default. They also requested the gallery to open up within the app (as in Telegram), and not as the phone gallery built-in app. They preferred a full-screen camera and half-screen gallery.

As for privacy and security options, users were surprised that they could make screenshots in the app and requested the ability to switch this off by default (make screenshots an opt-in). Some users expressed a need for per-group passwords, to protect the most vulnerable group chats.

Users were confused with the fact that Delta Chat adds their contacts to the contact list, and would like the ability to sort and categorize them in a customized way.

Regarding group creation and management, users were rather angry that they were added to a group without their explicit consent: they did not get a notification message, but were directly added to the group, which they considered as SPAM. This observation is interesting as other popular messaging apps, such as WhatsApp or Telegram do not give users a possibility to agree or disagree to be added in a group chat. This shows that users expect Delta Chat to show a more privacy-respecting behavior. While users appreciated notifications from new contacts ("invitation to chat with a contact"), they would expect the same kind of invitation message before being added to a new group chat, even a verified one.

Regarding "verified groups", testers were confused about the verification process as well as about the meaning of it. On the first day we did not ask users to "verify each other" but instead gave them a direct task to "create verified group". Users wanted to create a verified group manually but could not add anyone there so they had to find by themselves the QR-code verification, which took about 10 minutes with many vivid discussions. Users tried to send each other screenshot of the QR code instead of scanning it. In the end the QR-code function was quite well appreciated, though people suggested to have alternative ways for verification,

especially because one user had a broken camera and could not scan any code. This reinforces our previous findings about the need to provide more ways to join verified groups for users with older or somewhat malfunctioning phones.

For the group management, users asked the ability to "pin a message" to the top – so that they could for instance write rules for a certain group chat and keep it pinned for all the new members to be able to easily find it.Once again, people were confused about message deletion – whether it was deleted everywhere or only on their client side. They were also confused about "leave group" versus "delete group" options.Finally, users requested to create a separate category in the settings for "Language" instead of putting it under "Appearance".

The new "On-demand location streaming" functionality was perhaps the most interesting part of the test, and created many vivid discussions.

First, users did not understand immediately how to find other people's locations – they could not locate the "map" icon easily and could not interpret it well. They suggested to change the map icon. They were also confused about how to share their own location: they tried to click on the map instead of "attaching" location with the "attach" icon.

Users requested that their own location on the map looked different as other users locations. They also suggested to have an avatar or a letter to show on the map, so that they could detect faster which location mark belonged to which user. They requested to be able to attach voice messages to the map.

A user was surprised that the map showed their location from two hours before the test when he was at a local bar. They said they had not used Delta Chat before and were bothered that the app somehow knew they were in that bar. This means that we need to better explain users that location streaming uses « last known position » from Android – this should be written in the dedicated FAQ section on location streaming or changed in a way that only locations recorded after enabling location feature would be shown.

Users were confused with the « show traces » function – they wanted to have something that could indicate the direction of the movements (like arrows or clock…).

Users also requested the ability to add dots to the map with annotation or emoji to mark interesting or important locations. This feature was implemented during the team sprint, so that we could actually test it in real-life conditions during the "decentralization game" we played on Sunday (see below for more info).

General feedback was quite interesting: users said they liked Delta Chat but would like to know what exactly is different about it as compared to other messengers. They said that the "welcome messages" (onboarding messages) were rather strange and looked like marketing from other apps ("better / faster / stronger"). Instead of security they suggested to focus on decentralization / federation, and the community behind this project.

Here are some of the synthetic tables with user feedback on the tested functionalities:

Step 1: Onboarding and account creation

Task	n/a	😁	😊	😐	😣	😡
Open the app and create your account in Delta Chat	1	3	2	2	3	
Send a message to x @ testrun . org and deltachattester @ gmail . com		4	4	3		
Send an image to deltachattester@gmail.com			1		4	
Send a message to the neighbour to your right	1	5	4		1	
Make a photo and send it to the neighbor to your right		6	1	1	2	1
Accept invitation to the group СуперПуперТестери and write there		1	1	4	2	3
Create a verified group with the neighbor to your right and deltachattester @ gmail . com	5			3	2	2

Step 4: On-Demand Location Streaming

Task	n/a	😁	😊	😐	😣	😡
Open Advanced Settings and activate On-Demand Location Streaming		5	3		1	
Start sharing your location to the neighbor to your right	1	2	1		2	3
Start sharing your location to СуперПуперТестери group.	1	2		1	3	2

Start sharing your location to a verified group	3	3		1	1	
Send a one-letter message to СуперПуперТестери group	5	2	1	1		
Find and look at your location and the one of your contacts	1	1	1	1	4	1
Locate one-letter message on the map	5	1		1		2
Find and check the "Show traces" option	3	3			1	1
Deactivate On-Demand Location Streaming		6	1	1	1	

UX drawing session: April 27th

After the UX tests we decided to continue the effort to figure out good ways to explain and refine Delta Chat's "decentralized key exchange" together with our users and friends. We gathered at Delta Chat's Unconference at the "Port Creative Hub", a nice location next to the Dnieper river, and conducted a two-hour session with a dozen people around illustrating key concepts behind Delta Chat's architecture and values.
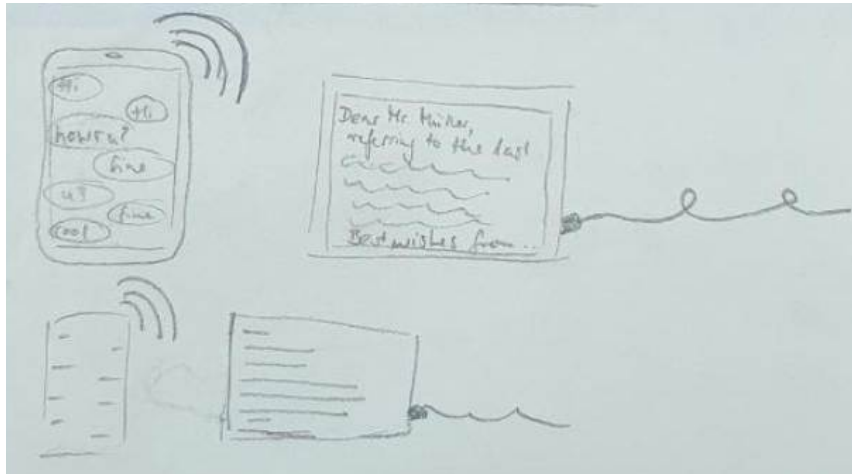

First, we asked our participants to draw "encryption and key exchange", second, we asked to draw "email versus instant messaging" and finally, we asked to draw "decentralization". Here are a few drawings that came out of the workshop.

decentr.

encrypt.

6

DC
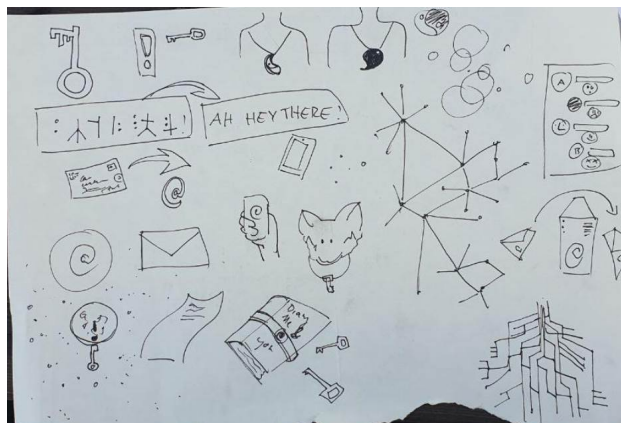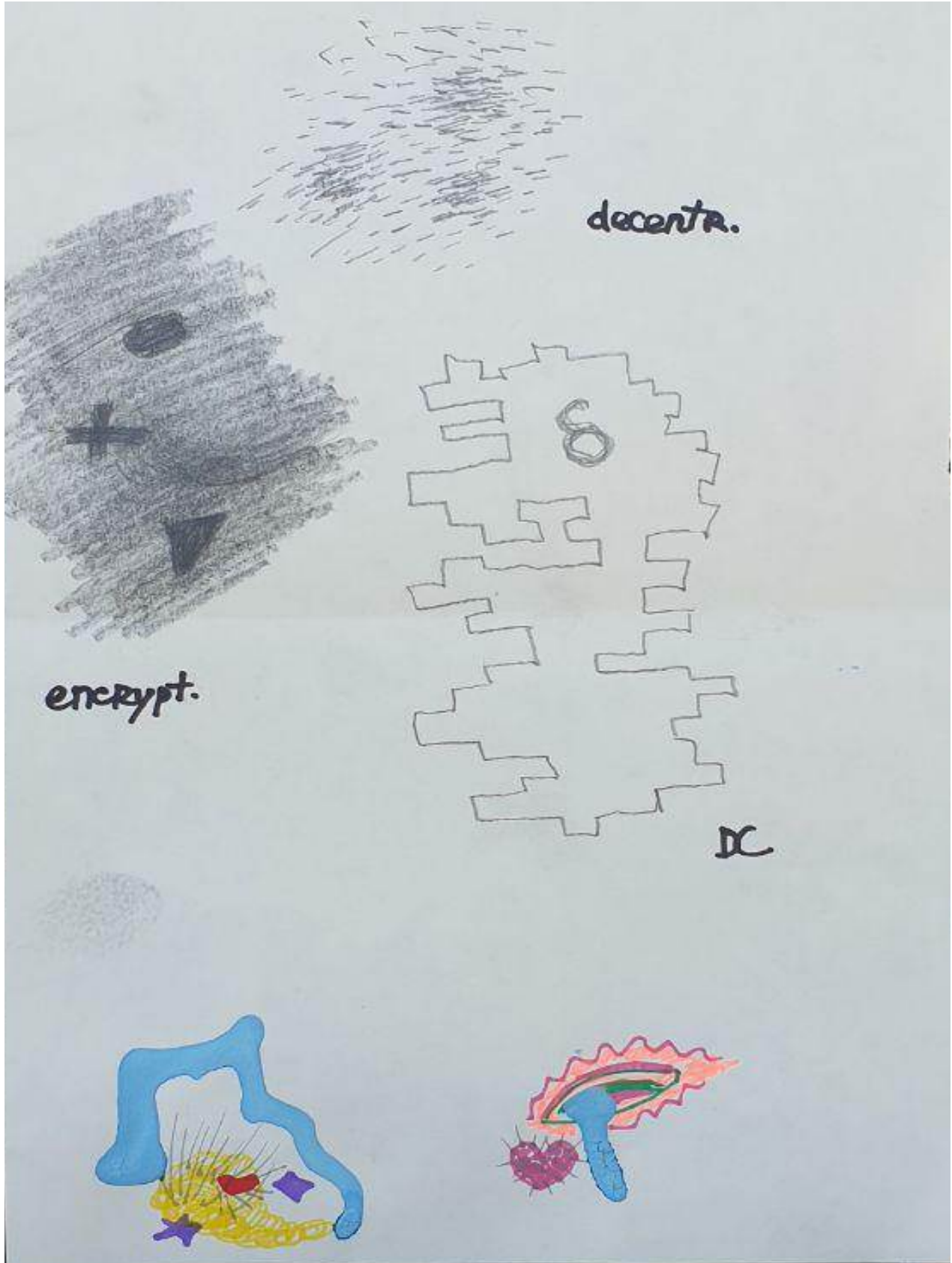
Email vs Chat
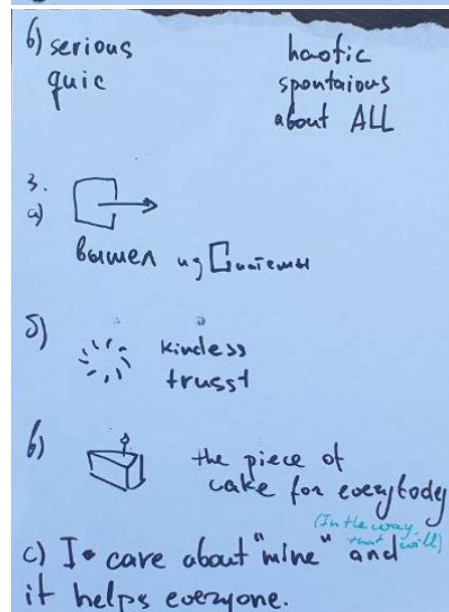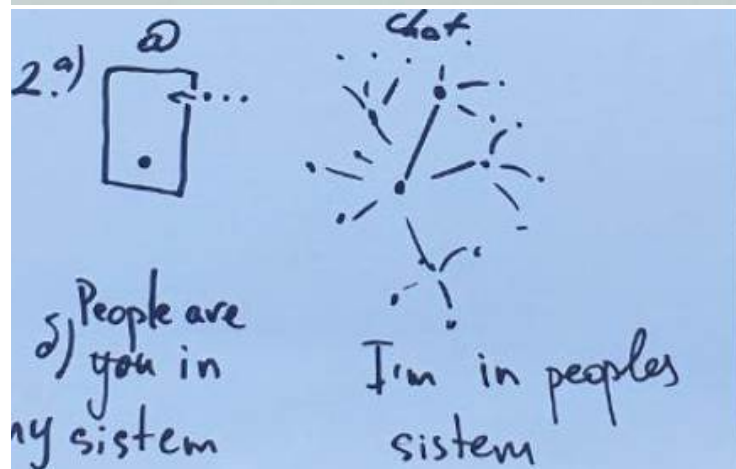
Email was generally perceived as "longer" and "more serious", also as something more adapted

to Desktop, while chat was perceived as suitable for mobile and for "all-purpose" communications. Discussions in chats were described as more "ramified" while email was felt as organized in a more linear way.

Another perceived difference concerned the "time" and data ownership. While email was felt as something that gives users more freedom to respond and move to a new account, chat apps were perceived as urging, and demanding an "always-online" situation, as well as collecting users data more than email.
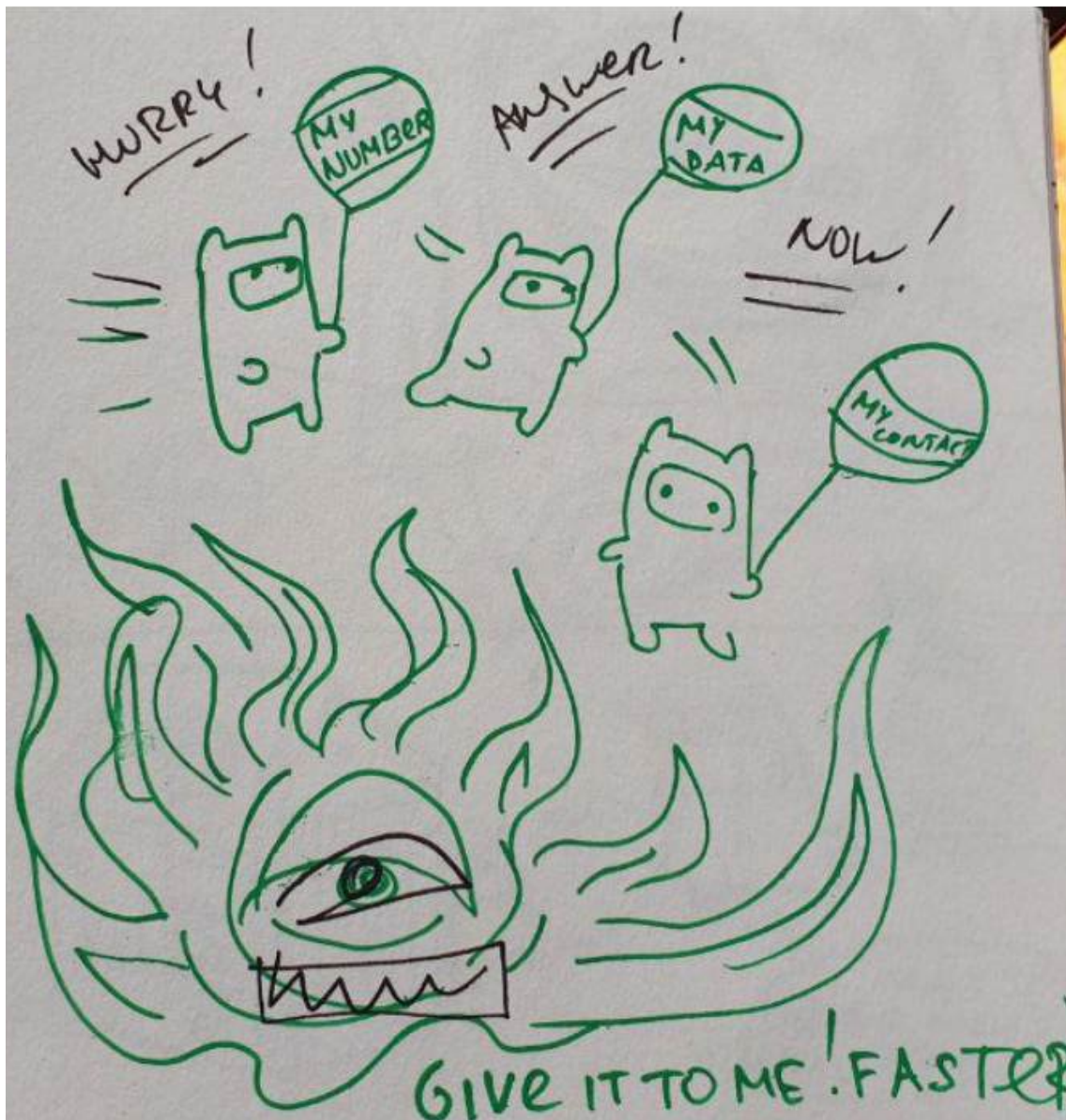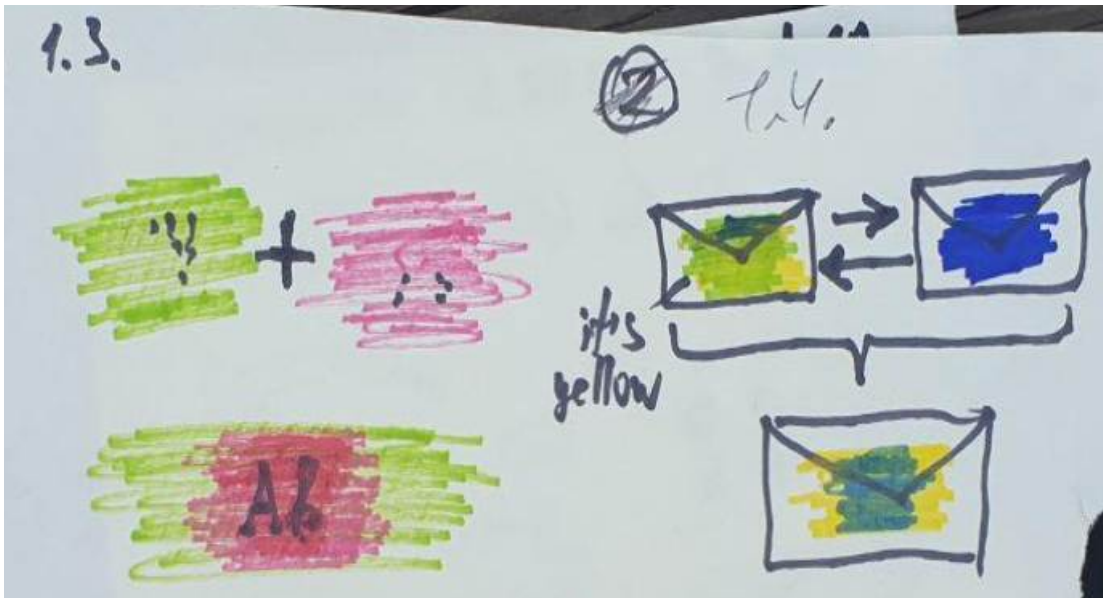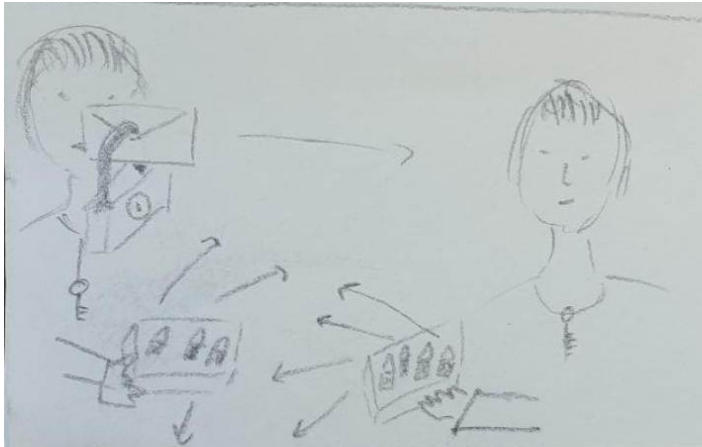

Chat: urgency, online, data collection
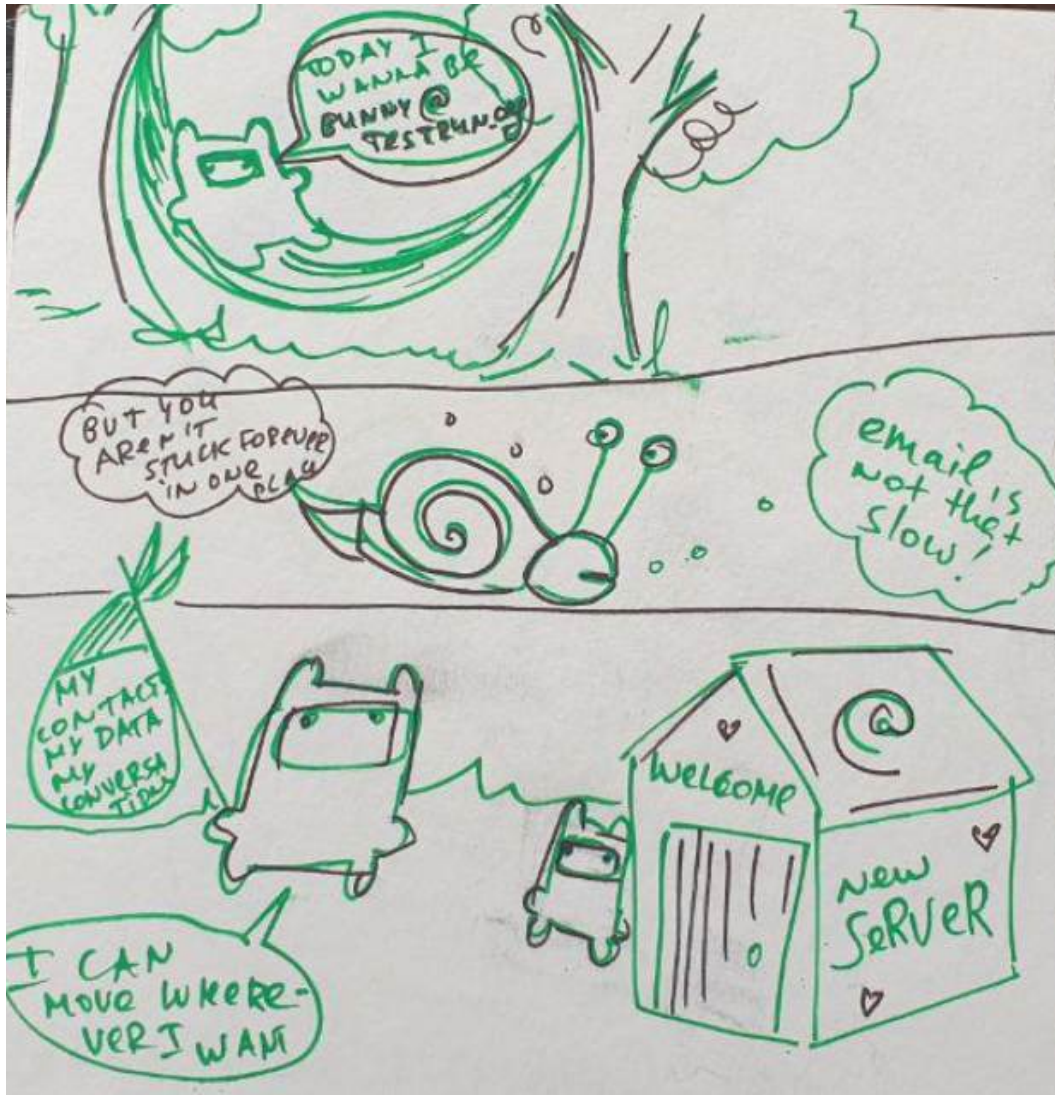
Email: relaxed, while not slow; easy migration from server to server, ability to easily create new identities…
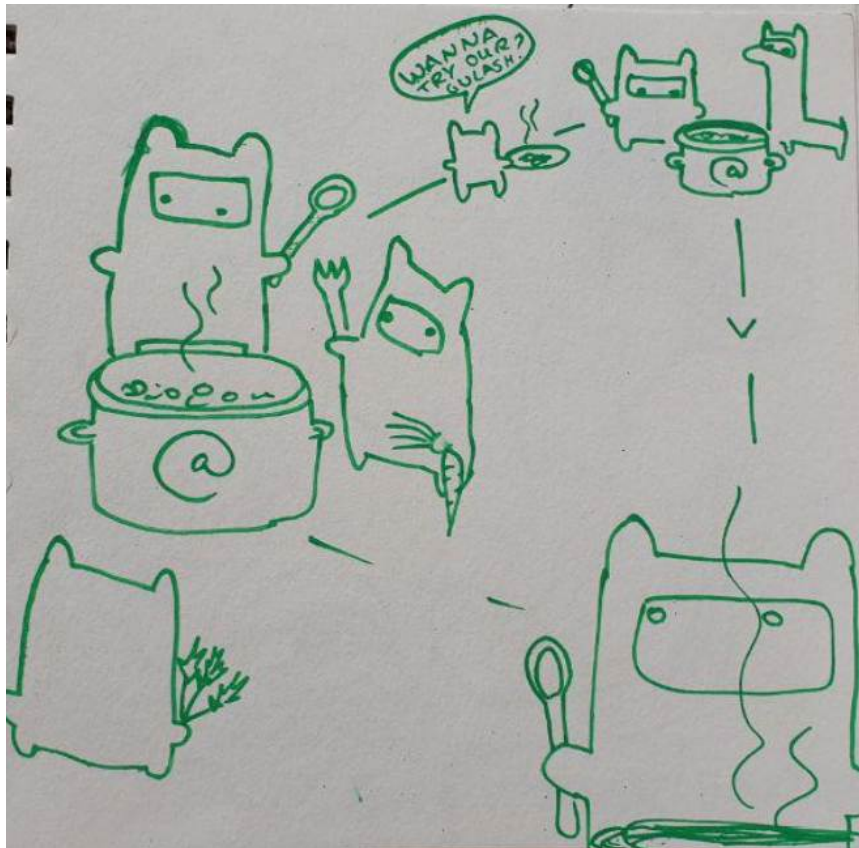
Encryption and key exchange

One of the interesting ways suggested to explain key exchange was with mixing colors.

Another idea was to symbolize the message locked with a keyhole that has a shape of both keys, so that the two of them are needed to open it

Decentralization

While we had a bunch of more or less classical organic metaphors for showing decentralization, one of the surprising ways to depict Decentralization was through a metaphor of "sharing food" and "cooking together". Here, the email servers were represented as "casseroles" where different food was made by different communities (hence, a collective email server administration, something that Delta Chat tries to practice through our community-managed server Testrun.org). However, regardless of different ways to cook food, the different communities are open to share and taste each other's food without problems. Such values as "trust" and "interoperability" are thus transmitted through this metaphor, alongside the ideas of diversity and self-organization.

Towards Decentralizing Gamification

On Sunday April 28th we organized a real-life quest to test Delta Chat's new feature - the On-Demand Location Streaming. Developed after our UX discussions at the "Delta Xi" gathering in 2018, location streaming allows to send location data and map incoming messages and photos from those who send location data in a chat. It is meant for asymetric usage scenarios where "basecamp" monitors users at risk of detention and abduction. Nevertheless it can also be used between friends and in fact was tested by developers with each other in the time leading up to our April gathering.
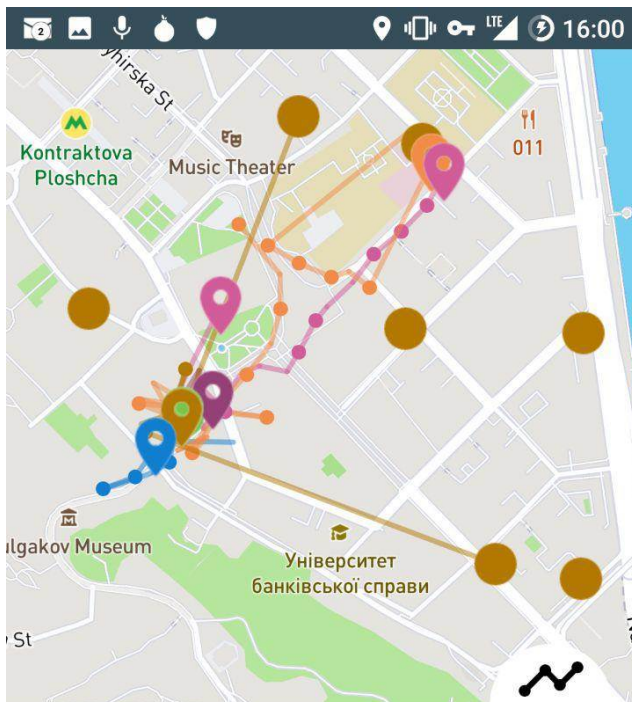
After enabling "on-demand location streaming" in "advanced settings" you may, in any chat, click the "attach" button and select "location". You then get a choice about how long you want to stream location data. This will attach GPS locations to all messages, including photos and other media. All locations and messages are usually end-to-end encrypted and location data is not shared with third parties – that is if your phone is generally configured to not share location data with Google or other parties.
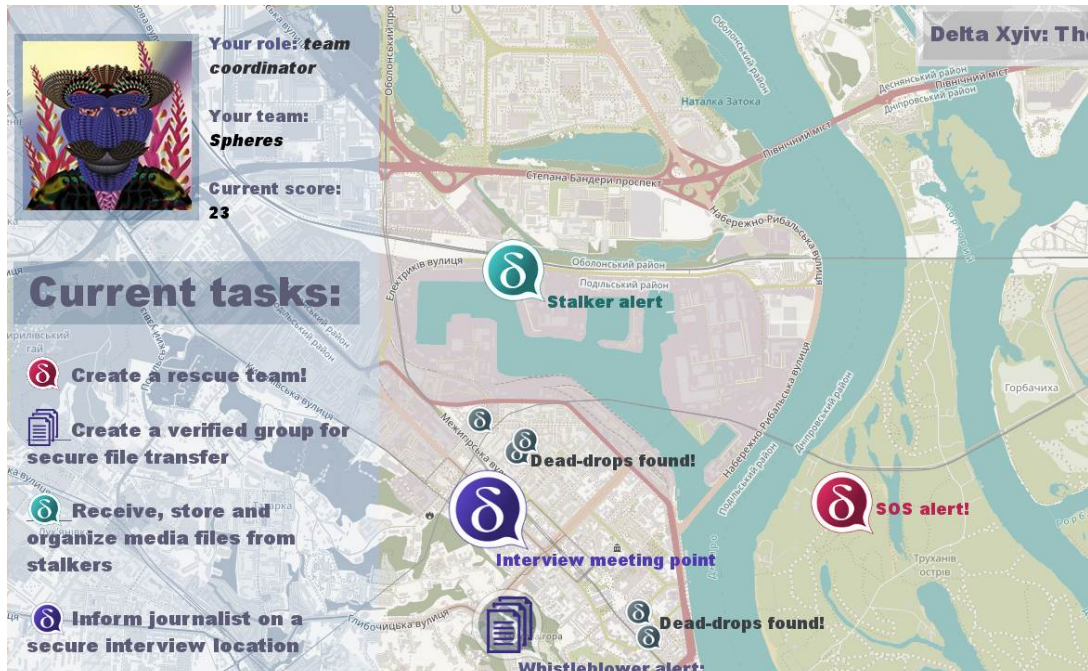
We have designed the Game as a district-wide treasure hunt, where participants are assigned with a role depending on the card they picked up, and are brought to execute a set of tasks. The cards were designed by Demian Feriy, local artist and musician.

Participants, including locals, were put in two teams, "Cubes" and "Spheres". The roles included the following: journalist, whistleblower, spy, politician, necromancer, stalker, magician, with each side co-ordinated by one person sitting on Delta Chat desktop at the "basecamp" location. Players turned on location streaming and had to carry out a complex set of concurrent tasks, with a lot of fun ensuing dynamics and confusion. The tasks included interviewing the politician in a secret location, finding dead-drops and specially made graffiti, taking pictures from inside a church (as that Sunday was the Orthodox Easter holiday, where everybody is out in the streets and churches), asking strangers on the street a question "What would you do if one day the Internet is shut down?". Special points were gained when one side managed to "jail" the other side's politician or journalist.

Stalker

– find deaddrops and distribute stickers, take photos of stickers and send to your group chat !
(coordinates of the deaddrops will be marked on the map in the group chat!)

– find graffiti with this sign, take photo of the graffiti, send to the group chat →
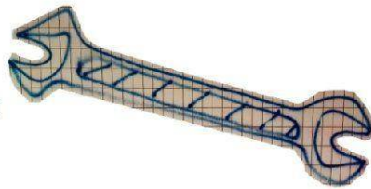
– get new tasks from coordinators (e.g. rescue teams)
– ask a person on the street :

« What would you do if Internet is shut down tomorrow ? »
write down the answer, send it to the group chat

Stalker role description

A Key task was to hunt for "dead drops" at 12 prepared places inside the city. Dead drops contained further tasks that involved finding and placing stickers. These stickers were designed by the International collective #Swarm[1]. The dead drops were added as Points Of Interests (POI) to the maps that players could access during game play. This "add POI" feature was itself added to Delta Chat just one day ahead of the game.
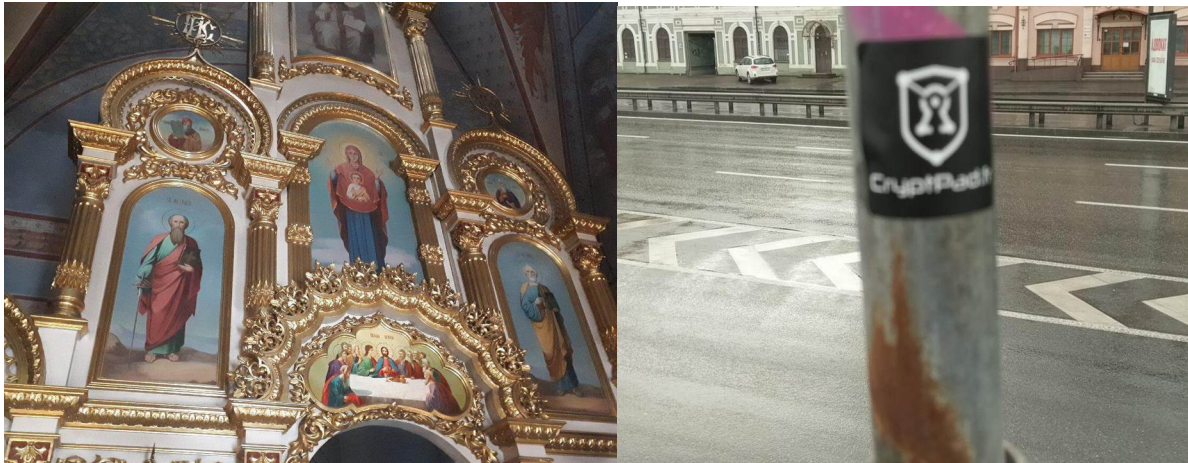
[1] https://t.me/anarchyplus

An example of a dead-drop

Distributing Delta Chat stickers via the Dead Drop system: gaming and dissimination!

Spying inside a church and spreading stickers of our friends' project

The game involved a lot of Delta Chat features beyond location streaming. Both groups quickly setup "verified groups" as they provide an easy way to get everyone into a group quickly. It also involved much of the brand-new location-streaming feature and players chasing each other through the city. One young "politician" in a blue jacket was found hiding in strange places … it was certainly telling how problems and confusion escalated from the overall stress of trying to understand what is happening, lost connectivity, "abducted" devices etc. It provided a first-hand glimpse into the complexities involved in coordinating human rights missions in repressive situations. Several players were eager to repeat and refine the game in their home town, as well as head towards a real-life test during a human rights mission or political action.

You can find out more about the event on the dedicated blog: https://xyiv.noblogs.org/ or or on our blogpost: https://delta.chat/en/2019-05-08-xyiv

Lessons learned and further strategies for Delta Chat developments:

The OTF Delta Chat Robustness and Usability project has shed light on many challenges and opportunities brought by the unique way Delta Chat has been evolving throughout the year. Firstly, we have started to forge and grow our own ways of working as a team: unlike many other projects, while we do have quite regular IRC gatherings, we largely prefer smaller face-to-face offline meetings where we can have enough time to dive into curent progress and discuss more detailed topics depending on who is in the group. We had a dozen of such gatherings, sometimes around big conferences such as RightsCon or 35c3, sometimes pretty spontaneous, such as team sprints in Freiburg, some of which were especially focused on Location Streaming, while others centered around Rust development or usability challenges.

Our Kyiv gatherings turned out to be something bigger than just a team sprint, as we managed to open up the Delta Chat team to working and thinking closer with various unexpected communities - from local artists and activists, to feminist hackerspaces and email server collectives. We have started new collaborations with designers (Demian Feriy who will work on the further design for Delta Chat-enabled games and bots), as well as email server administrators (such as Syster Servers). All this has brought us to a unique way of conversation-based UX/implementation developments, which means getting UX testers, developers, prospective users, potential contributors together to better understand each other, feel and estimate our possibilities. We have also deployed our own way of collaborating via various online/offline arenas, and a specific form of coordinating our work. You can read more on this at https://support.delta.chat/t/xyiv-off-and-online-developments-on-and-off-topic-long/421.

It is important to mention that some of our recent directions were actually decided based on contributions of our new formal and informal members: for instance, the Rust development was largely brought forward by Friedel thanks to his skills and motivation. Therefore, while we do not build a strict structured plan for a year ahead, we prefer to give opportunities to and priorities those in the team who have the energy, time, ideas and skills to give our project a new turn.

Our team meetups and conversations with prospective contributors and advisors have already given birth to a few new features currently in development: for instance, the On-Demand Location Streaming was requested and conceived together with our partner Evgeniya from the ADC Memorial, a human rights observer in Belarus and Ukraine. Her organization was also supporting our user-tests. After a few meetups at various conferences, we are now starting a new experiment with Eastern European NGOs that monitor elections, as well as other groups such as LGBTQ+ activists.

The "chat bot" feature has also been progressing recently, mostly on a prototype level, such as

the "poll vote" and "weather bot". We think that evolving the chat bot ecosystem could drive more interest in Delta Chat, as it will give possibilities to external developers and designers to enhance current Delta Chat functionalities and adapt it to their community needs.

After the success of our Sunday "Decentralization Game", we are working on further developing various gaming possibilities. For instance, a project to build a "Werewolf" gaming chat bot is under consideration.

The experience of a real-life game in Kyiv city center has led us to considerreal-life testing during various political and social events. We are planning a summer test with a local activist group in Germany, and after our July stable release we will head towards an important test at the end of 2019 in Eastern Europe, during a mass demonstration.