

Disappearing messages

- ability to turn on/off disappearing messages feature per conversation, specify ttl
- use preferences framework, preference affects local deletion of both sent and received messages
- special chat item on change
- in direct chat - chat item can be interacted with to agree or disagree with preference change, updates preference accordingly
 - how does party that offered preference change learn about disagreement? (maybe just no preference update from contact is ok, since it's still not on if it's not mutual)
 - how does it learn about disagreement on ttl? (it's on already - so it works for both but differently if there's no agreement)
 - single updating chat item or per event? (probably per event is better since they can be spaced in time)
- in group - set by owner
- should it be allowed to be configured globally?
- change of setting shouldn't prevent previous disappearing messages from being deleted

Design

- add `delete_at` field to `chat_items` table, index `idx_chat_items_delete_at`
- add `disappearingItems :: TMap ChatItemId (Async ())` to `ChatController` (use `Weak ThreadId?`)
- new background process that periodically scans for disappearing messages bound to be deleted during next 30 minutes:
 - add `cleanupManager :: TVar (Async ())` to `ChatController`
 - periodically gets items to schedule for deletion based on `delete_at` field
 - for items to be deleted in next 30 minutes - add thread to `disappearingItems` - thread delays until `deleteAt` date, then deletes and sends `CRChatItemDeleted` to view
 - for items past current time - delete in bulk

- race condition between bulk deletion of expired items on start and opening a chat with them - they should be removed from chat view once deleted - don't optimize for bulk deletion and create threads? create multiple CRs after bulk deletion? create single chat response with all ids?
- when chat item is deleted locally, either by user or via "delete for everyone" feature, kill thread and remove from map
- when MsgContent chat item is sent or marked read, add thread to disappearingItems based on chat preference
- UI shows timer based on chat item's createdAt date and deleteAt date

Preference agreement:

- new preference types?

```
``` haskell data DisappearingMessagesPreference =
DisappearingMessagesPreference { allow :: FeatureAllowed, ttl :: Int }
```

```
data DisappearingMessagesGroupPreference =
DisappearingMessagesGroupPreference { enable ::
GroupFeatureEnabled, ttl :: Int }
```

```
-- requires changing functions and types using Preference and
GroupPreference ```
```

- chat items to contain old and new preference value

\*\*\*

Maybe agreement shouldn't be via preferences framework, but ad-hoc? For example:

- new protocol messages XMsgTtlOffer ttl, XMsgTtlAgree ttl, XMsgTtlOff
- for direct chats on XMsgTtlOffer contact disappearingMessages fields is updated to
- for direct chats on XMsgTtlAgree check ttl equals offered, then turn on
- for group chats only XMsgTtlAgree has to be sent, should only be accepted from owner
- XMsgTtlOff turns off unconditionally, for group chats should only be accepted from owner
- types:

```
``` haskell data DisappearingMessagesState = DMSOff | DMSOffered  
ttl | DMSAgreed ttl
```

```
data Contact = Contact { ... disappearingMessagesState ::  
DisappearingMessagesState, ... }
```

```
data GroupInfo = GroupInfo { ... disappearingMessagesState ::  
DisappearingMessagesState, ... }
```

```
-- make part of ChatSettings? ```
```