**Must have**

* + **Group Hierarchy**
    - Groups must be made of either (sub)groups or users
    - A group will always have a group message associated with it
    - Every group must have at least one moderator
      * Only moderators can add/remove individuals / groups to group
      * Anyone can request to invite, but mods must approve
      * Moderators can destroy groups
        + Perhaps users can have privileges granted by moderator

Invite, remove, etc.

* + - Group membership should be inherited
      * A user cannot join a subgroup without first joining the super group
  + **Joining and Forming Groups**
    - Any user can form a group
    - When a user makes a group, they are automatically the moderator
    - Forming a subgroup can be done by anyone within the super group
    - Groups and Users can be set to public or private:
      * public means they will appear in public searches for users outside of group
      * Private means they will not appear in public searches
    - *Users and groups may block specific users (selective privacy)*
      * *Not outlined but a good functionality*
  + **Additional Group & User Functionality**
    - A user should be able to follow another user or a group
      * Following a group is a request to join the group; the request must be confirmed by moderator
      * Following a user is a request to start direct messaging between them, if they do not already have the ability to do so
    - A user must use a password to log in
      * Users may be able to log in with external credentials
        + My.northeastern, facebook, etc
    - A moderator should be able to add additional security for a group
      * A moderator should be able to set an optional password on a group. Members of the group must input this password in order to read or send messages related to this group chat
    - A user should be able to set a profile picture unique to his group
    - A user should have a display name as well as a handle
      * A handle must be unique while a display name does not
      * A display name should be variable from group to group
    - Members of groups should be visible to other users in groups
    - Users should be able to see active members in their circle
      * A circle includes followed users
  + **Communication**
    - A user should be able to selectively reply to users in a group
    - Direct messaging should be able to occur between any two users, so long as they are visible to each other
      * Follow relationship or fellow groupmembers
    - There must be an option to set an expiration date on a message so that it automatically deletes itself
    - A user must be able to set themselves on do not disturb
      * A user on do not disturb will not be displayed as active
      * A user with do not disturb set will not receive notifications when messages are sent to him or her
    - The application must support different languages and characters
    - The application must have support for media
      * Emojis
      * Emoticons
      * Audio / Video sharing
    - Deleted messages should be retrievable by the sender
    - A message recipient should not be aware of an unread message that was deleted by the sender
    - Messages should be queued for users who are not online, and the user should receive them in the correct order upon sign on
    - Messages must have time stamps based on sender’s local time

**Should Have**

* **Government**
  + CALEA support
  + The application should have the ability to provide special users with ‘government’ level privileges that allow them to:
    - Place wire taps on message channels, without the users being aware
    - Flag certain users so that they are notified when they log in
  + All messages should be stored in the database, even deleted messages, and should be able to be queried
  + The application **does not** have to be able to decrypt encrypted messages

**Maybe Have**

* **Communication**
  + A message may be forwarded to another user not in the original conversation
  + The sender of a message should be notified if a message is forwarded and see all users that have received the message in a forwarding chain
  + A user should be able to reply to a message. A chain of replies should be classified as a thread.
  + The application should be able to automatically translate a message into a different language
  + A user should have the option to make a message encrypted
* **Other thoughts**
  + Parental control feature
    - Flagging inappropriate content
  + Private messages
    - Cannot be forwarded or cut and pasted
  + Hashtags in messages to categorize them
  + Schedule meetings/events
    - Include RSVP feature