Kompose

*While kompose is kept reasonably simple
to allow for an intuitive UI,
to get the technicalities just right
is always a challenge.
Some of the more interesting ones will be adressed here*

```json
1  {
2    "type": "SESSION_UPDATE",
3    "error_message": null,
4    "sender_uuid": "981e4fa1-9f26-470e-8d78-1d3095c1f7f5",
5    "sender_username": "Boney M",
6    "session": {
7      "uuid": "e8d75a93-3b7c-4132-ba2e-82841be5fe1c",
8      "creation_date_time": "2017-12-13T16:16:37.428Z",
9      "host_uuid": "981e4fa1-9f26-470e-8d78-1d3095c1f7f5",
10     "session_name": "Disco Party",
11     "session_status": "ACTIVE",
12     "songs": [
13       {
14         "uuid": "fd3ee34f-16da-4682-add6-d1f943851d80",
15         "proposed_by_client_uuid": "981e4fa1-9f26-470e-8d78-1d3095c1f7f5",
16         "song_status": "REQUESTED",
17         "download_status": "FINISHED",
18         "order": 0,
19         "source_url": "https://www.youtube.com/watch?v=T5emcbg_wZk",
20         "title": "Tanita Tikaram - Twist In My Sobriety",
21         "length_in_seconds": 291,
22         "download_url": "https://r1---sn-nfpuji-1gil.googlevideo.com/videoplayback?mt=1513181799",
23         "thumbnail_url": "http://i.ytimg.com/vi/T5emcbg_wZk/hqdefault.jpg",
24         "down_votes": [
25           {
26             "uuid": "29224d11-2e16-789f-1ff3-12418426f7f5",
27             "client_uuid": "981e4fa1-9f26-470e-8d78-1d3095c1f7f5"
28           }
29         ]
30       }
31     ],
32     "clients": [
33       {
34         "uuid": "981e4fa1-9f26-470e-8d78-1d3095c1f7f5",
35         "name": "Boney M",
36         "is_active": true
37       },
38       {
39         "uuid": "70998773-4dcd-4411-80f8-85c0a4f90832",
40         "name": "Rick Astley",
41         "is_active": true
42       }
43     ]
44   },
45   "song_details": {
46     "uuid": "3fa6aea0-5ebd-4376-b189-d60dfda35099",
47     "proposed_by_client_uuid": "981e4fa1-9f26-470e-8d78-1d3095c1f7f5",
48     "song_status": "REQUESTED",
49     "download_status": "NOT_STARTED",
50     "order": 1,
51     "source_url": "https://www.youtube.com/watch?v=c1idAsPYfd4",
52     "title": "EPICA - Unchain Utopia (OFFICIAL LYRIC VIDEO)",
53     "length_in_seconds": 286,
54     "download_url": "https://r2---sn-nfpuji-1gil.googlevideo.com/videoplayback?mt=1513181287",
55     "thumbnail_url": "http://i.ytimg.com/vi/c1idAsPYfd4/hqdefault.jpg",
56     "down_votes": []
57   }
58 }
```

protocol

at the heart of the application
a special protocol makes sure
all actions performed by clients
which impact the other participants
can be broadcast efficiently to the
network

playlist

the playlist prepares the next songs and
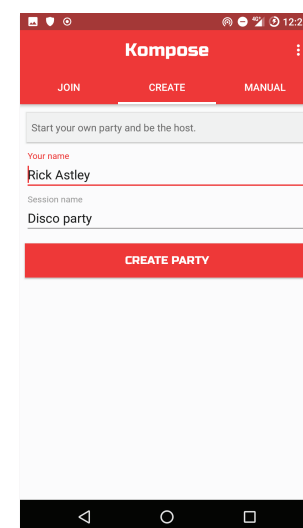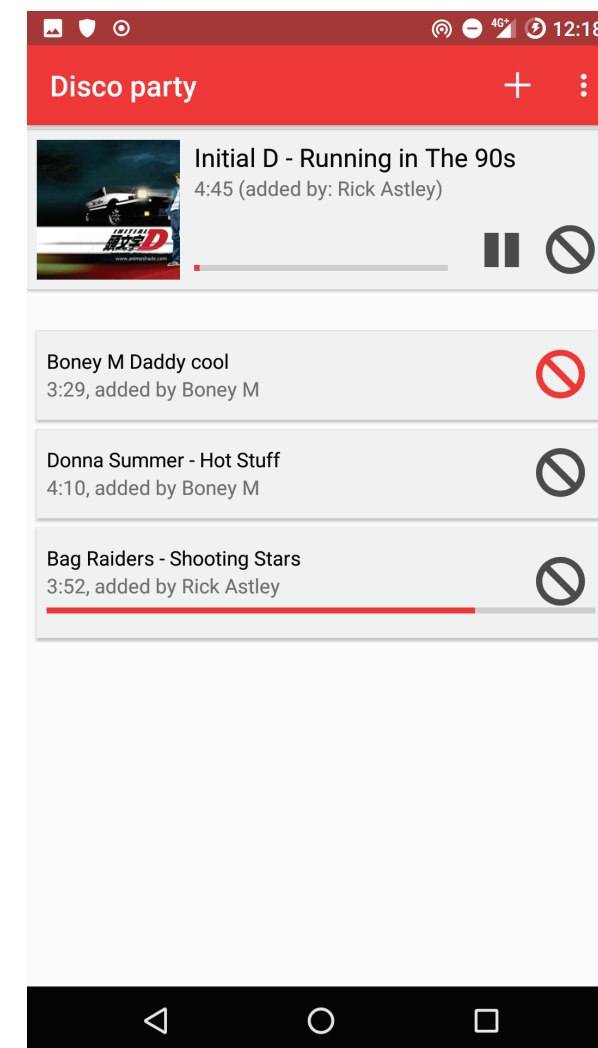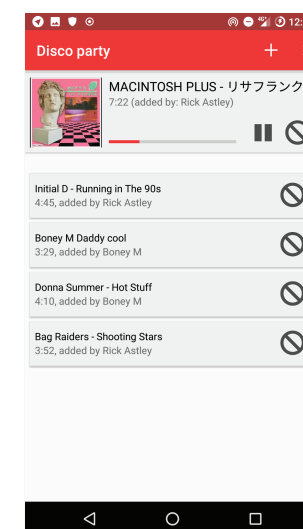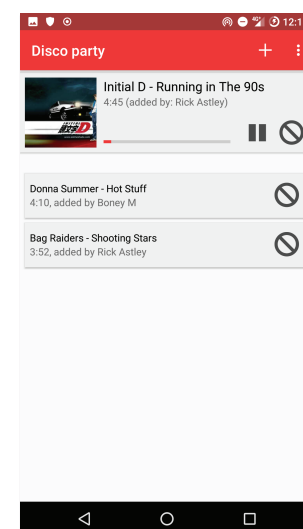keeps all participants up to date

only on the device of the session owner
the song is actually played

the owner can also play / pause a song
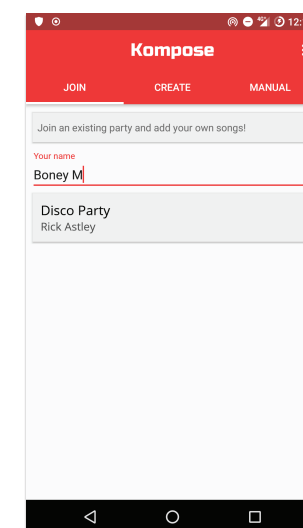
each of the participants can vote
on a specific song to be skipped

from youtube the thumbnail and other
basic data of the song is extracted

create new session

upon creating the session,
it is broadcast using
Network Service Discovery
as provided by Android

join using NSD

all active session in the network
are found with NSD, a library
is used to support API versions
which are even lower than 7

join manually

using the port and IP of the
owner of the party,
one can also join directly
without using NSD