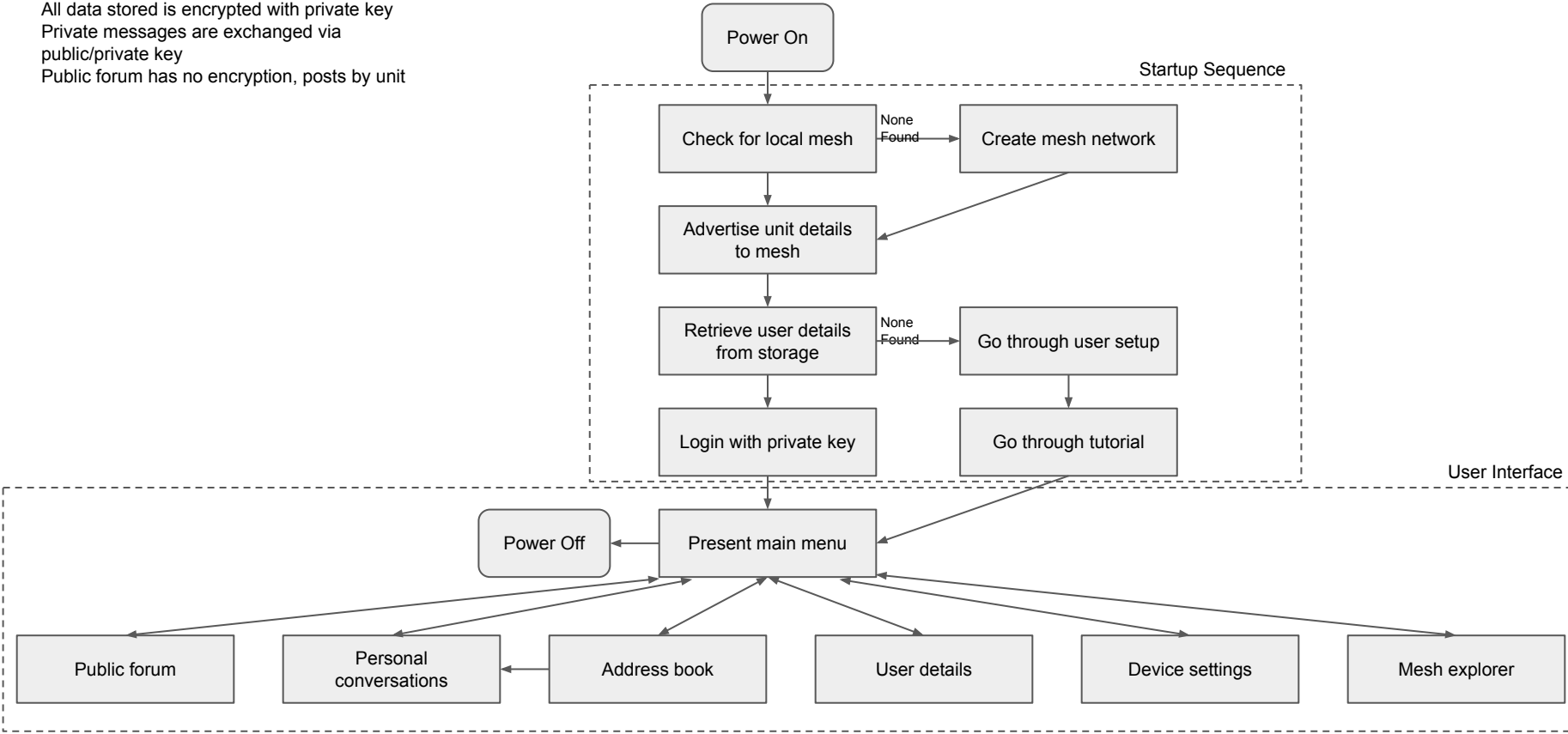# Usage Flow

General Notes:

- Nothing publicly links a unit to a user
- All data stored is encrypted with private key
- Private messages are exchanged via public/private key
- Public forum has no encryption, posts by unit

Startup Sequence

Power On

Check for local mesh — None Found → Create mesh network

Advertise unit details to mesh

Retrieve user details from storage — None Found → Go through user setup

Login with private key

Go through tutorial

User Interface

Power Off ← Present main menu

- Public forum
- Personal conversations
- Address book
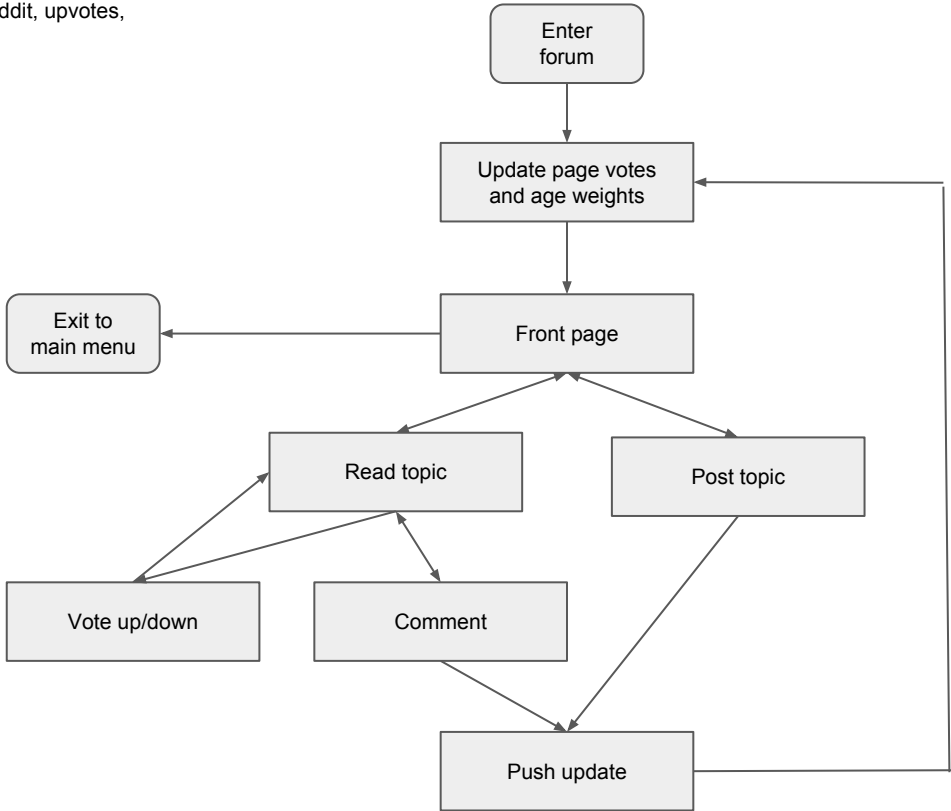- User details
- Device settings
- Mesh explorer

Public Forum

General Notes:

- Nothing publicly links a unit to a user
- Forum functions similar to Reddit, upvotes, post aging, etc
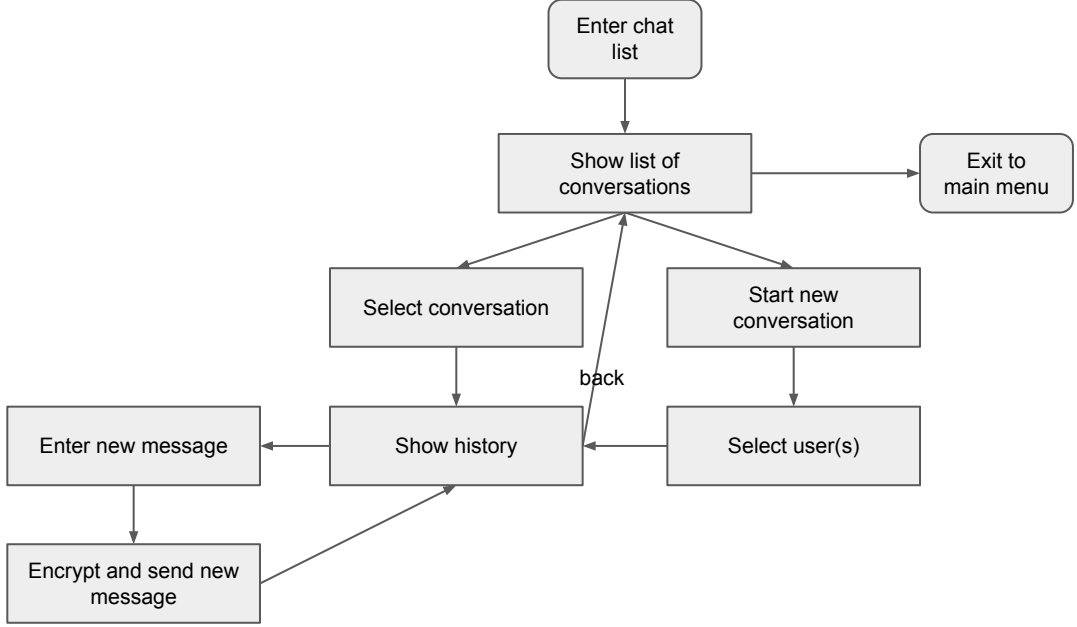- Posting is reputation free

```
                          ┌──────────┐
                          │  Enter   │
                          │  forum   │
                          └────┬─────┘
                               │
                               ▼
                       ┌─────────────────┐
                       │ Update page votes│◄────────────┐
                       │ and age weights  │             │
                       └────────┬─────────┘             │
                                │                       │
                                ▼                       │
   ┌──────────┐          ┌─────────────┐                │
   │ Exit to  │◄─────────│  Front page │                │
   │ main menu│          └─────────────┘                │
   └──────────┘           ╱          ╲                  │
                         ╱            ╲                 │
                        ▼              ▼                │
                 ┌───────────┐   ┌───────────┐          │
                 │ Read topic│   │ Post topic│          │
                 └───────────┘   └───────────┘          │
                  ╱       ╲ ▲          ╲                │
                 ▼         ▼            ╲               │
          ┌───────────┐  ┌──────────┐    ╲             │
          │Vote up/down│  │ Comment  │     ╲            │
          └───────────┘  └─────┬────┘      ╲           │
                               ╲            ▼           │
                                ▼   ┌──────────────┐    │
                                    │ Push update  │────┘
                                    └──────────────┘
```

Personal Conversations

- Think GChat
- Sending message requires reputation

```
                          ┌──────────────┐
                          │  Enter chat  │
                          │     list     │
                          └──────┬───────┘
                                 │
                                 ▼
        ┌─────────────────────────────────────┐          ┌──────────────┐
        │       Show list of                   │─────────▶│   Exit to    │
        │       conversations                  │          │  main menu   │
        └───────┬──────────────────────┬───────┘          └──────────────┘
                │                       │
                ▼                       ▼
     ┌────────────────────┐    ┌────────────────────┐
     │ Select conversation│    │     Start new      │
     │                    │    │   conversation     │
     └─────────┬──────────┘    └─────────┬──────────┘
               │          back           │
               ▼                         ▼
 ┌──────────────────┐  ┌──────────────┐  ┌──────────────────┐
 │ Enter new message│◀─│ Show history │◀─│  Select user(s)  │
 └────────┬─────────┘  └──────────────┘  └──────────────────┘
          │                   ▲
          ▼                   │
 ┌──────────────────┐         │
 │ Encrypt and send │─────────┘
 │   new message    │
 └──────────────────┘
```

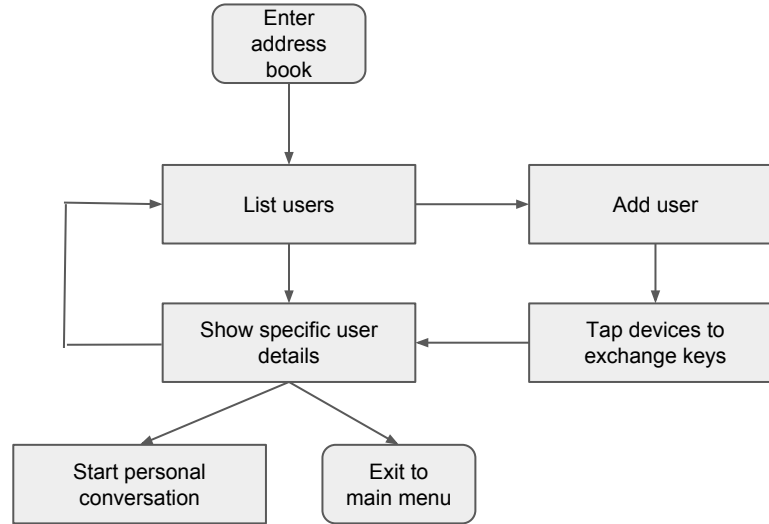# Address Book

General Notes:

- Users are added to Address book via NFC
- All data stored is encrypted with private key
- Private messages are exchanged via public/private key

```
Enter address book
        │
        ▼
   List users ──────────────► Add user
        │      ◄──────┐           │
        ▼             │           ▼
Show specific user    │    Tap devices to
   details            │    exchange keys
        │  ◄──────────────────────┘
   ┌────┴────┐
   ▼         ▼
Start personal   Exit to
conversation    main menu
```
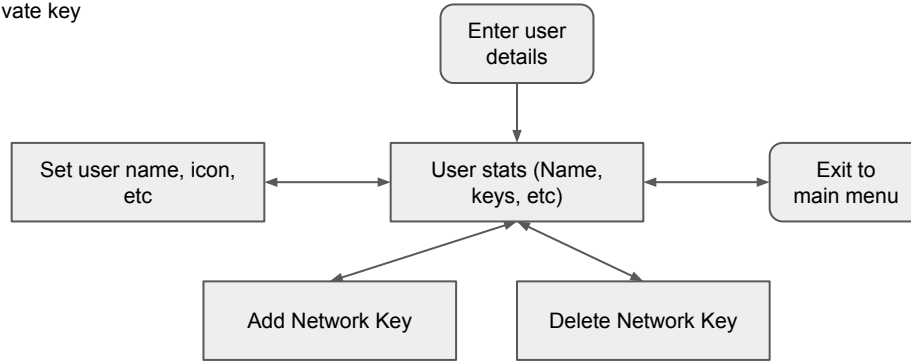
General Notes:

- Nothing publicly links a unit to a user
- All data stored is encrypted with private key

User Details

```
                        ┌──────────────┐
                        │ Enter user   │
                        │   details    │
                        └──────────────┘
                               │
                               ▼
┌──────────────┐        ┌──────────────┐        ┌──────────────┐
│Set user name,│◄──────►│ User stats   │◄──────►│   Exit to    │
│   icon, etc  │        │(Name, keys,  │        │  main menu   │
│              │        │    etc)      │        │              │
└──────────────┘        └──────────────┘        └──────────────┘
                          ▲        ▲
                ┌─────────┘        └─────────┐
                ▼                            ▼
        ┌──────────────┐            ┌──────────────┐
        │ Add Network  │            │Delete Network│
        │     Key      │            │     Key      │
        └──────────────┘            └──────────────┘
```

General Notes:

- Nothing publicly links a unit to a user

Device Settings

```
                          ┌─────────────┐
                          │    Enter    │
                          │   device    │
                          │  settings   │
                          └──────┬──────┘
                                 │
                                 ▼
┌──────────────────┐   ┌──────────────────┐   ┌──────────────────┐
│ Settings (Wifi,  │◄─►│  Hardware Stats  │──►│  Nuke it (Erase  │
│ System Update,   │   │(Battery, signal, │   │   everything)    │
│      etc)        │   │    time, etc)    │   │                  │
└──────────────────┘   └────────┬─────────┘   └────────┬─────────┘
                                │                      │
                                ▼                      ▼
                       ┌──────────────┐       ┌──────────────────┐
                       │   Exit to    │◄──────│     Confirm      │
                       │  main menu   │       │                  │
                       └──────────────┘       └──────────────────┘
```
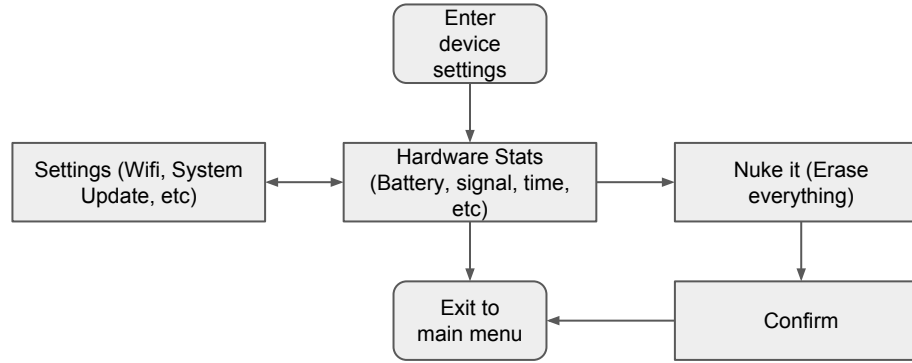
General Notes:

- Nothing publicly links a unit to a user
- Using time delay propagation, signal strength, and hop counting, we should be able to get a network diagram with rough distances

Mesh Explorer

```
┌─────────────┐
│ Enter mesh  │
│ exp         │
└─────────────┘
       │
       ▼
┌──────────────────┐         ┌─────────────┐
│ Network Stats    │────────▶│ Exit to     │
│ (Units, signal,  │         │ main menu   │
│ bandwidth, etc)  │         └─────────────┘
└──────────────────┘
       ▲
       │
       ▼
┌──────────────────┐
│ Map of network   │
└──────────────────┘
```