# greenerthumb Design

#### fan

fan connects its STDIN to the STDINs of listed out-programs and STDOUTs from listed out-programs to STDINs of listed in-programs.

### message

message is where greenerthumb messages from the ICD are defined and the bytes-JSON conversion is implemented.

#### bytes

bytes converts JSON messages from STDIN to bytes written to STDOUT.

# json

json converts bytes messages from STDIN to JSON written to STDOUT.

# bullhorn

bullhorn allows data to be sent on a network from publishers to subscribers (3)

#### publish

publishes data from STDIN to all subscribers.

#### subscribe

subscribes to a publisher and write data to STDOUT.

#### sense

sense writes greenerthumb JSON messages from sensors to STDOUT. These can be fanned into message/bytes piped into bullhorn/publish. This allows sensors to be excluded (1).

#### air

air senses the 'Air Status Message' (2a).

#### soil

soil senses the 'Soil Moisture Status Message' (2b).

# log

logs JSON messages from STDIN to a file. This can be used with bullhorn/subscribe piped into message/json to log sensed data. Logs have the day appended and are rotated each day. (4).

# plot

plots greenerthumb JSON messages from STDIN. This can be used with bullhorn/subscribe piped into message/json to plot sensed data (5).

# process

processes logs to find statistical values.