

# DLM flowchart sketches

Calvin  
Molitor

## DLM-DAM startup interaction

DLM

Receive and  
Decode  
config file

**TODO:**  
config files

send CAN command  
to connect DAM to add  
certain parameter to  
a certain group (Based  
on config table)

**TODO:** what will this  
command look like? What  
data will it contain?

Make clear standard for them

request all parameter  
groups from DAM with  
standard data request  
command

; ;  
; wait to RX  
; param groups

confirm all parameters  
were received as expected

**TODO:** How the DLM will check  
if it received the expected  
params from each request

DAM

On startup, send  
command to DLM that  
it needs configuration

; ;  
; wait for config  
; data

add connect parameters  
to groups based on  
the commands sent

; ;  
; wait for  
; DLM to request  
; param groups

send parameter groups  
as DLM requests

were all the parameters received as expected?

no

no  
x2

yes

send CAN command to connect DLM to add that param to a certain group

continue to normal DLM-DAM behavior (shown below)

make some sort of note that configuration failed and how it failed

**TODO:** How will this error be recorded?

### Normal DLM-DAM Behavior

DLM

DAM

**TODO:** How to handle all the different groups

Wait for the correct time to request a param group from a DLM

request param group from DAM with CAN command

+ wait for data

Send group parameter data

Record received data

## General Notes:

- The DLM will need another auto-gen struct for ASCII names for all of the params to record them in data and error messages
- groups can have same name on different DAMs and must be treated separately
- Struct on DLM that matches the CAL file to store all of the groups

## Gopher Logging config file

Param	ASSOC.	DAM	DAM ID	Req. Freq.	Group	Group ID
FL-wheelspd		DAM-FL	5	100 Hz	0	0
FL-shock pot		DAM-FL	5	100 Hz	0	0
FL-wing-pos		DAM-FL	5	60 Hz	1	
			⋮			
FR-wheelspd		DAM-FR	6	100 Hz	0	0
FR-shock pot		DAM-FR	6	100 Hz	0	0
FR-wing-pos		DAM-FR	6	60 Hz	1	
			⋮			
RPM		DAM-ENG	4	200 Hz	3	
Eng temp		DAM-ENG	4	10 Hz	4	
Calm-pos		DAM-ENG	4	200 Hz	3	

## Meeting Notes

- DAM has configuration file with what sensors and groups it has
  - Sends DLM what it has on startup
  - Firmware must be rebuilt if new sensor is added
  - DLM will then request one group at a time when needed
- GopherCAN hash, wellness check done by DLM









