Wi-Fi firmware for ESP32

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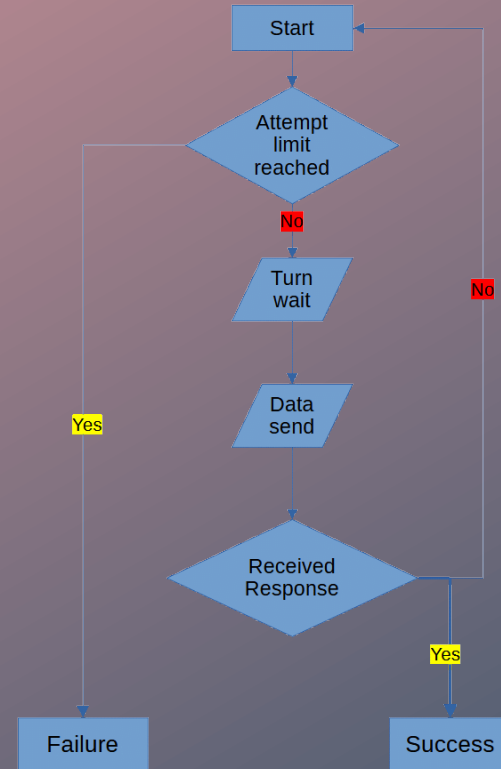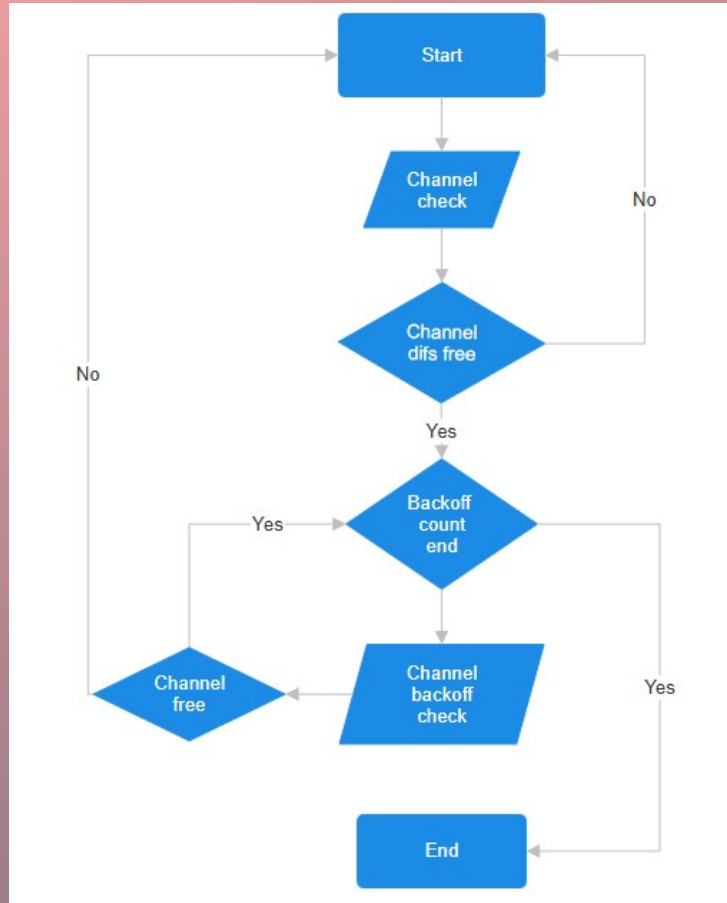
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Original Plan

Tasks \ Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Traffic generation module	██	██																
CSMA/CA			██	██	██													
RTS/CTS								██	██									
NAV										██	██							
Application													██	██	██			
Documentation						██	██					██				██	██	██
Improvements & Tests							██					██				██	██	██
Presentation / Delivery								▯					▯					▯

How It's Going

Tasks \ Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Traffic generation module	██	██																
CSMA/CA			██	██	██	██	██											
RTS/CTS								██	██									
NAV										██	██							
Application													██	██	██			
Documentation						██	██					██				██	██	██
Improvements & Tests							██					██				██	██	██
Presentation / Delivery								▯					▯					▯

Traffic Generator

The base of this model consists of two parts, the configurable time wait between the transmission of the packets, and the function sendData given as a parameter, which should already act in accordance with csma/ca, created with the help of the other modules in this project. Considering the function given is a responsibility of the rest of the code, this class is already fully functional, containing methods to stop and start this module at will, and supports configurable wait times.

CSMA

Issues

- Unpredictable crashes: Possibly more than one cause – could be our use of the radio and the timing, and/or a bug the radio firmware.

What Is Next

- RTS/CTS

- Network Allocation Vector (NAV)

- Configuration Application

- Improvements to current infrastructure and solve crashes