Review and recommended revisions of "Automatic Generation of Waypoint Navigation File for Use in Mission Planner"

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This project is a great application of the topics discussed in ME701. There was a clear need for automation in the waypoint generation for the unmanned aerial system design team. Many of the features discussed in this report are minimum requirements for this type of system. The primary short-comings revolve around the addition of features that would make this software more useful in the future. The most important recommendation for this work is to include additional supporting literature. Since the design focuses on the development of a graphical user interface, a help file would greatly enhance this software. I can definitely see this software being used by the design team members for many years to come, but there is a high probability that the software will be abandoned if ample support is not included. Other major revisions include the completion of a save function, especially for the '.poly' format, support for additional rotations and shapes, and a possible re-design of the waypoint calculation algorithm.

The following comments are listed in order of appearance. Major revisions are denoted by bold-facing

1) Remove
2) Remove or rename
3) Remove (unnecessary)
4) Consider using "the software"
    a. Vague language (it) should be avoided
5) Define these acronyms
6) Reword for technical clarity
7) Remove
8) Define
9) Remove
10) Acronyms should be defined in-line at their first use
    a. Remove the section
11) Remove
12) Remove
13) Reword for technical clarity
14) Adding a picture or diagram would help describe this better
15) Remove
16) Reword or remove
    a. Need to be more specific
17) Remove
18) This paragraph is unnecessary
19) **Quantifiable results should be presented**
20) Avoid vague language
    a. It, many, them, this – all occur periodically throughout the report
21) An equation would be more descriptive
22) This section is confusing
    a. A figure could help describe the format
23) Be aware of the significant figures

a. How specific can the location actually be determined?
   b. Is there error in the conversion factor calculation?
24) Should the turn radius be editable?
25) Not a word
26) **Variable angle support is very important to add**
27) This detail does not add to the report substantially, consider removing
28) Reword
29) This phrase does not make sense as worded
30) **This process is very convoluted as described**
   a. **Consider rewording this description for clarity**
   b. **Diagrams could help**
   c. **This calculation could possibly be much more versatile if vector math was used to generate the waypoints without considering the actual latitude and longitude and then scaling the output to fit the region**
31) Combine with previous paragraph (single sentence paragraphs should be avoided)
32) Reword for clarity
33) Remove
34) Reword as "… and contains a value of 3 (integer)" or similar
35) Most values in the table are 16, the 16 value should be described instead of 17
36) Remove
37) Reword for conciseness
38) Remove
39) Can the 2 'legs' of the alternating lawnmower be shown in different colors?
40) Remove
41) Remove
42) **Save functionality (with .poly) is very critical**
43) **Additional of a help screen and about screen would help future users significantly**
44) **Results need to be quantified**
45) **Reword and quantify**