Memo

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| To: | Kevin Pintong |
| From: | Timothy Wright |
| Date: | 07/04/2019 |
| Re: | [Embedded Project Idea Proposal |

My embedded senior project is going to be a modular solar panel cleaner. My client has installed their solar panels right next to each other. This means that they are no longer able to run water pipes between the panels and install cleaning jets. They also installed their solar panels on an out building. Consequently they did not have to follow fire code which states that there must be a three foot walkway on the roof every 12 feet. This lead to a solar array size of 18 feet by 58 feet, significantly larger then the typical household solar array. My client lives in an area where grass seed is the main crop and therefor lots of dust is kicked up during growing season and my client ends up cleaning his solar panels almost everyday. This was problematic for him as he works a full time job and does not always have the time. Another issue is the outbuilding is 17 feet off the ground at the edge and 24 feet in the center, which made it difficult to clean without scaffolding. Therefor my client has tasked me to create a solar panel cleaner that will traverse the entire solar array and clean it at least once a day. Instead of building specifically for the 18 by 58 feet dimensions I will make the solar array cleaner modular in design so it can be applied to most any sized home solar array.

My client was unable to find a suitable solar panel cleaner that would fulfill his purposes. Most solar panel cleaners are geared towards industrial use where the solar arrays are installed on the ground in a long line instead of a large more square like array. There are other solar panel cleaners out there but they do not clean as often as he needs.