**Project Premonition**

General videos talking about the overall project.

<http://research.microsoft.com/apps/video/dl.aspx?id=246906>

<https://www.youtube.com/watch?v=Yi9vuZWiPFw>

The project description webpage.

<http://research.microsoft.com/en-us/um/redmond/projects/projectpremonition/default.aspx>

An article about the project.

<https://blogs.msdn.microsoft.com/msr_er/2015/06/10/project-premonition-bringing-researchers-together-to-detect-diseases-before-they-become-an-outbreak/>

Talk by Ethan Jackson discussing the project: <https://channel9.msdn.com/Events/Ignite/Microsoft-Ignite-New-Zealand-2015/M117>

Ethan is an ISIS graduate that works in CPS.

**Trap information**

------- From Microsoft -------

Microsoft’s hardware engineers produced a model of the trap shell (see Cylindrical Shell.pdf). (It’s a 3D model viewable in Adobe Reader.) The specifications of the trap are:

1.      Weight: 3lbs

2.      200 mm diameter x 300 mm high

3.      150 mm diameter trap top

4.      Trap construction will be from non-magnetic materials

The actual trap CAD is much more complex, including PCBs, electronics, mechanics etc., but this rough shell could be 3D printed for testing by students. (The full design cannot be 3D printed; manufacturing is non-trivial.) The students should design a:

1.      A docking attachment for the top of the trap. The smaller cylinder on the top is actually a gas dispersion mechanism; it disperses a lure that brings mosquitoes to the trap. The hardware lab will provide more detailed CAD of this shortly. (They are still doing the design)

2.      A base that will keep the trap upright when it is placed on the ground. These could be, for instance, 3 legs like that found on the lunar lander. This base should be challenging considering that a drone may not be able to place the trap perfectly level.

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They are supposed to be designing a smaller trap. We (JD at Penn and I) were very clear that we cannot use such a large trap in the UAVs for class.

**The Vehicle**

Penn is building the UAV and should ship it on the fourth of January. It will looks something like the one here: <https://www.grasp.upenn.edu/research-groups/kumar-lab>. There is a parts list on the portal, but it seems to be down (12/29/2015).

**CPS-VO.org**

This is the portal ISIS built for the NSF CPS-VO project. I will tell you the group once it is working again. I cannot connect to it right now. It has the rules for the competition, the UAV parts list, CAD diagrams, etc. on it.

ISIS is putting together a virtual machine with ROS, Simulink, etc. on it. It will not be ready at the start of class. I am hoping next week we can get a peak at it.