



■ FERAL DOG DATASHEET

- Species Name: Captain Planet
- Reverse Engineer: Aaron Shelley
- Logic Development

First, dogs are released on the site. They will assume the pack search radius and their own search area within that. Initially, the dogs are sensing for any and all of the pre-programmed "danger" chemicals (Basically, anything airborne, with negative affects on a person's health) contained in an on-board list with preset "danger" levels in this list as well. As soon as one dog senses a chemical in the "danger zone," it will stop moving and communicate what this compound is and its own position within the pack to the rest of the pack. The pack will then begin actively seeking only that one chemical. And the pack will attempt to place the dog that has stopped moving in the center of the circle. So, as new dogs sense significantly higher concentration gradients, the pack will move to place the new dog in the middle, and the old dog with the high reading will begin to move and search again. So, through this behavior the pack will move around the site until the dog in the middle has the highest reading and no other dog is getting a significantly higher reading. At this time, the pack as a whole will stop moving, though the individual dogs will still be actively moving and those watching will be able to see epicenter of the chemical being traced. It will be at the one dog that is not moving. After one chemical has been tracked in this manner and the findings recorded, there are 2 options: 1) Simply move to a new location and start again, or 2) Release at the same location, and temporarily remove the previously tracked chemical from the on-board "danger" list.

My first dog, Captian Planet, is the dog pictured. I had some rather technical and good, if I do say so myself, ideas for the modification of this I-Cybie based Feral Dog. I developed a 4-wheel steering mechanism which runs off of one servo. It consisted of two axels connected to the servo arm, the front axel is connected by 2 straight rods at 90 degree angles to the servo arm and the axle, while the rear axel is connected by 2 straight rods that connect to the end of the axel opposite, or farther from the end of the servo arm which they are connected to (in essence making an X with 45 degree angles at the servo-rod and axel-rod joints). I know this sounds confusing, and if I can get a picture and figure out how to upload I will. Anyway, this mechanism meant that if the servo rotated 15 degrees, then the dog would be turning at 30. It would have allowed for tremendous maneuverability. Unfortunately, I lacked the time and attention span to get it attached to the dog in a way such that it would feasibly operate. I also was attempting to use whegs, but again ran into another problem. Because of the dimensions of the I-Cybie, the axels would have needed to be rather long (i.e., 12" in the rear and 14" in the front) to allow enough turning without the whegs catching the body of the dog, unless I were to use rather small whegs, and that would eliminate the purpose of using them (to "walk" over obstacles) to begin with. So, I decided to take the approach that most everyone else seemed to be taking: basically turn the dog into a quadriplegic attached to a homemade remote-control car.

Then, I realized that unlike the Goddard, which looks like a brick with a head and 4 legs, the I-Cybie is actually rather sleek and rounded, and that means that it is difficult to attach wheels to the body, at if you want them to still be aligned. At this point I thought about creating a new body casing for the plexy-glass in the lab, but it was getting late in the semester, and I decided to try something else. Jeff told me that he was having luck with simply reprogramming his I-Cybie. So, I decided to give it a shot, but I still wanted to mechanically alter a dog. So, I talked to Natalie and got a new dog to mechanically alter in case the reprogramming of the I-Cybie did not work. So, now I have the "to be programmed" Captain Planet, and the Cyborg looking No Me Gustan Las Toxinas (for the non-spanish people that means: I don't like the toxins...). No Me Gusta is a simple feral. The dog base used is basically an empty shell (kind of like a Harvard grad...). The only thing that is kept from the original design is the two LEDs that act as the eyes and the body casing, minus the legs. There is a plexy-glass plate rivetted to the front with to motors mounted on the right-angle-bends on either end. There is a plexy-glass battery-shelf off the butt of the dog with a servo mounted on the end. That servo is connected to a rear differential with two free turning wheels on separate axels (the separate axels are to allow for easier turning, since the outside wheel will need to turn faster than the inside). And that is where Ferals come from. The End...at least for now