



## Getting Things Done, Ground Zero

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On our way to the Titan missile silo in Green Valley Arizona, I introduced myself to Tania Broveak Hide, who is the CEO of Electric Genetics. Tania was the organizing force behind the Hackathon that preceded the Bioinformatics Conference, and she's already excited about the next one scheduled for Feb. 24 in Capetown, South Africa.

Green Valley is more than 30 minutes south of the Westin La Paloma Resort, the site of our conference. So during the ride we had plenty of time to talk about the emerging relationship between the open source community and bioinformatics. We discovered that there was much to talk about. None of this discussion would have taken place had we not been offered a tour of the Titan Missile Museum. In case you're a little rusty on your ICBM history, the Titan II is the largest liquid fueled ballistic missile developed by the United States. In the early 60s, there were 54 sites established in the US. The Green Valley location was constructed in 36 months at a cost of \$8.3 million, plus another \$2.2 million for the missile itself (in 1962 dollars). Even though Green Valley was deactivated in 1984, it has been preserved complete with missile and (non-radioactive) nuclear warhead. It is the only Titan II site of the 54 that remains intact.

On our way to the museum, we looked out the bus window at the cactus and snow-crested mountains surrounding the valley. Tania and I began to wonder out loud why the open source projects within the sphere of bioinformatics seemed to have more traction than in some other areas. Real progress toward setting up a commons for information sharing was being made in the various neighborhoods such as Bioperl and Biopython.

Tania told me about success of the 3-day Hackathon. She said the group of programmers who participated worked diligently on existing open source bioinformatics projects, and that they made substantial head way, with another intensive scheduled only weeks away in South Africa.

I asked her why there seemed to be more traction in this area than, let's say, with the Mozilla project. We talked about possible reasons for this difference. We know, for example, that the biology community is highly motivated to reach solutions for the challenges they are facing, such as the fight against cancer. These scientists need to get things done and produce results. I doubt there is this kind of motivation within the halls of Netscape.

Down at Level 7 within the silo, you can look at the base of the stage one rocket engine for the missile. The she told me how leaders in our communities, such as Nat Torkington and Ewan Birney, encouraged preparation before the intensives so valuable programming time was used efficiently. This kind of preplanning, followed by action, proved to be effective for moving projects forward. Tania also believes that sometimes programmers need to get together and work in person to keep themselves energized. And that projects conducted via e-mail and ICQ might suffer from lack of human

chemistry. We even talked about applying the principles of Extreme Programming to bioinformatics, and what a nice fit that could be. But we failed to come up with a catchy name for our hybrid creation. Our bus then arrived at the site, and soon we found ourselves seven levels deep in a silo that was 146 feet underground and 55 feet in diameter. The missile itself was 103 feet long, and looked every inch so as we stood at the base and looked upward.

Col. Hugh Matheson Ret. introduced us to the Titan II missile site. Inside the silo our tour leader, Col. Hugh Matheson Ret., described the ingenious system of checks and double-checks that had to occur before a missile could be launched. He showed us the precision of design applied to every component inside the facility.

For example, we examined a 6,000 pound blast door that was so precisely constructed that it could be opened by a single person. You could barely slide a piece of paper beneath the bottom of the door and the floor.

This entire facility, complete with control center, backup systems, communications equipment, power generators, and security devices -- all enclosed beneath a 760 ton sliding door that could open in less than 20 seconds -- took 36 months to construct, and is still viable 40 years later, though disarmed due to treaty. Thank God we never launched a Titan II. But as I stand 100 feet deep in the silo looking upward, it occurs to me that we have the infinite capability to build anything -- good or bad -- when motivated, talented people work together.

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