

On May 7, 2001 I met with Raytheon employees:

7:30 AM - 7:45 AM Donna Roty – hired recruiter and Rossi Gelate – internal recruiter [Spelling] we were informed on Raytheon Health care.

We were told that we were selected because we are very special in our field of expertise.

We were told that there is an acceptance procedure.

First employees in the company will interview us

Second Raytheon will contact our last two employers.

Third Raytheon will contact the referrals we provided.

Fourth Raytheon final evaluation will take about three weeks.

We asked to verify and correct the job application for mistakes

8:30 AM – 9:00 AM - Mr. Severance (first meeting) told me that he is aware I have applied for several jobs applications for different jobs. He told me that I will meet and be interviewed by several employees at Raytheon. Each one has expertise in different areas along the jobs that I applied for, and after that they will decide the best job for me from all the jobs I applied for. Said that in time, when someone does not like the job he works on, they rotate employees to make them happy. There are only happy employees in the company. Mr. Severance told me that the letter I wrote to Jackson is very touchy. Asked why I was working such a short time in TRW. I told him because I requested to inform the Government that their technology does not work so they terminated me. Said not to worry, and do my best at the interview with the employees. Said Raytheon does not work like that.

9:00 AM – 9:45 AM - Mr. William was only interested with what I did [Tim].

9:45 AM – 10:15 AM - Mr. Spezeski told me about the system's poor robustness, that 125 signatures are composing the MDL. That Raytheon's MDL are not covering proper and possible fluctuations in threat scenarios flights. The use of Optisig, is consuming too much time to create the MDL. Works only when prior information is accurately provided. Which is the Government job to provide. Not reported.

Unknown temperature of deployed objects is not a problem anymore. MDL is built with Government provision of deployed objects temperatures. Agreed that deployed objects temperatures are highly sensitive to aspect angle, materials, and dynamics, all of a wide range of possibilities, without accurate prior knowledge. Not reported simulation of miss match, because it is a Government problem.

No cluster selection, it is the job of the Government to provide the correct cluster. Agree that still association is needed, and sensitive to prior knowledge of cluster formation. Not reported.

I showed him the unclassified ellipses plots and black body temperature relations with IR signature plots. Agreed with the problems I presented, that a change of 10 degrees in temperatures leads to a change of over [redacted] in average IR signature intensity, and to a drop of over [redacted] in discrimination performance. Noise on IR signatures impacts matching in-flight features against MDL.

Discrimination is performed by neural connection of frequencies, a portion done by someone else. Looking to improve performance. Aware of the fragile performance, but Government problem and therefore not reported.

10:15 AM – 10:45 AM - Mr. Kuntimad told me about the features extracted and their ability to select

the warhead within one wavelength of signature data as long as there is no noise on the signatures. Agreed that no mathematical tools to filter out earthshine spikes, or nuclear spikes. Not reported but performed simulations. No cluster selection. Frequency is the main feature also average of signatures intensity. I showed him the unclassified ellipses plots and black body temperature relations with IR signatures plots. He agreed with the problems I presented that a change of 10 degree in temperatures leads to a change of over [REDACTED] in average IR signatures intensity, and to drop of over [REDACTED] in discrimination performance, and not to comply with the TRD. Noise on IR signatures impact matching in-flight features against MDL. Reports to the Government but excluded these cases. Agree that 10 degree temperature change over what assumed deployed is a very likely to happen. They simulated these cases, but this is the Government problem and therefore no need to report. Noise on IR signatures impact matching features against MDL. Some times no identical features to match. The Gov. problem, therefore not reported.

10:45 AM – 12:10 AM - Mr. Severance (second meeting) told me to give him a short presentation I prepared. Mr. Severance told me about the features extracted and their ability to select the warhead within one wavelength of signature data as long as there is no noise on the signatures, and as long as the deployed objects temperatures known accurately. The Government provides the temperatures of the Deployed objects. Simulated poor MDL, and got poor results. Not reported, because it is the Government job to provide the temperatures of the objects. No cluster selection. Frequency is the main feature also average of signatures intensity. I showed him the unclassified ellipses plots and black body temperature relations with IR signatures plots. Agreed with the problems I presented. Noise on IR signatures impact matching features against MDL. Not reported because it is Gov. problem. Mr. Severance pointed on the unclassified ellipses plots that I brought with me, he pointed to where was the warhead, and stated that it is a problem to select the war head on this IFT-1A flight tests. He said that Raytheon performed many additional flight tests. (IFT-6). Mr. Severance told me that the Discrimination performance is [REDACTED] to correctly select the warhead. It was simulated and reported. He pointed the warhead on the ellipses plots that I brought with me and indicated that the fact that there is a large overlap of the ellipses area of the warhead and the replica ellipses area is an indication that there are big problems to discrimination technology. [He selected himself the warhead ellipses out of 11 ellipses on the page, I did not point to him the warhead ellipses, he knew it was based on Bayesian approach].

12:15 AM – 1:30 PM - Mr. Alex at ATR informed me about the noise problem of the sensor, the gaps, the spikes the dips, and the degradation of the performance as a result of that noise present. Visual camera was removed. He was looking to improve the discrimination based on data fusion. Works only when prior information is accurately provided. Unknown Temperature of deployed objects is a problem. Did not report. Did not report robustness is an issue. Agree that there are over [REDACTED] changes in parameters values within one scenario that overlap, and over [REDACTED] between different scenarios, which degrades the discrimination performance over [REDACTED] and/or reduce it to simple random selection of one out of N deployed objects. If Accurate threat type is not provided, then non compliance, and even then [REDACTED] non-compliance. No report to Government regarding overlap of parameters values. It is Government problem. Discrimination robustness is defined by the fluctuation in MDL as a result of flight experiment redefinition. Or compliance with the TRD/SOW for different possible MDLs for the same flight-test. North Korea threats are high priority now. System performance collapse with poor MDL exponentially. N.Korea threats are problems with earthshine and noise. Not reported. SNR so high, can not filter in time to make decisions.

1:30 PM – 4:00 PM - Launch with Mr. Severance (third meeting) told me that the NMD/EKV Discrimination project is having money. There is money until 2010. The Government just mailed another check.

MIT provided algorithms and proof that the EKV feature extraction is a valid concept. The Raytheon Discrimination Concept complies with Physics principals and laws. IR signal and Threats Phenomenology analysis was performed, and validated the technology Concept. No validation of concept was done in the present of noise, earthshine, and nuclear environment. No validation against unknown MDL.

The flight tests have GPS/beacons system transmitter, which is mounted on every deployed object and incorporated into the TOM. Transmit deployed objects temperatures, dynamics, and locations. Corrects MDL along the flight. If threat type is not given can not do discrimination, because of overlaps of features. It was simulated, but not report because it is the Government problem, and not theirs to alert the Government.

I told him that on 1997 his performance was only [REDACTED] That Mr. Mobley said that on his dead body he will approve Raytheon technology over TRW technology. I told him that I was working with DCIS and also with BMDO communicating with Englander through DCIS and personally.

Mr. Severance never asked me if my security is still valid.

Aware that new decoys, replicas can be build in 3 months, and to update NMD/EKV software and MDL is of the order of [REDACTED] years which leave the system permanently vulnerable. Did not report. Raytheon won the competition with TRW because of the Neural Connection tool.

MIT provided algorithms to clean the signatures noise.

There is no problem that MIT cannot solve.

NRC also tested the Raytheon discrimination performance and found it to be over [REDACTED] and performance and robustness exceed Government requirements. NRC also build MDL with Temperatures provided by the Government.

I provided Mr. Severance and Raytheon HR with the information that I Expert consultant and services to ARMY/BMDO/GBI/DCIS on NMD/EKV discrimination technology during 1996-9 for was my. I gave my approval to communicate with the Government agencies to find out about my work and performance, with NRC, POET and TRW.

Mr. Severance told me that he is relatively new to Raytheon. That he has heart problems and that he exercise every day.

He told me he will communicate with Mr. Englander and others at BMDO and NRC, and MIT and he will also communicate with DCIS, to get their opinions about me. Said he got the Reed's at DCIS Reference check on me in my file. He said he would be back with me with an answer within one week. He said he see that there are a lot of projects I can fit in.