

## HAROLD WEISBERG

7627 Old Receiver Rd.  
Frederick, MD 21702

10/23/95

Dr. Angela A. Meyer  
Failure Analysis Associates  
149 Commonwealth Drive  
Menlo Park CA 94025

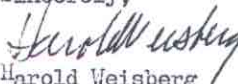
Dear Dr. Meyer,

With further references to your 10/7 and to my reply, this past Tuesday evening when I was at Hood College for a seminar ~~not~~ related to our correspondence I gave the VCR cassette to Dr. Gerald McNight. In looking at it I could not stop it and get any clarity on our machine but at normal speed it seemed to me that the picture you have of the <sup>clear</sup> ~~stone~~ is clearer than the one I use in Post Mortem on page 608. If so and if I can get a copy I'd appreciate it. The one I used Dillard made for me from what he said was the best negative "the federales" left him. Perhaps your picture is clearer from enhancement.

Subject to your approval I use your letter in what I have written except for the salutation and the last two paragraphs. It is more neutral than I would have been! I've not cut any part of any sentence. I made no changes in it of any kind.

In an interview of which I have been told Dr. McCarthy referred to Posner being given what I think he referred to as a kit or something like it on your bar presentation. I do not intend to go back to what I have written but I would like to see it and I then would also give it to Hood. You sent me a reprint of the U.S. News treatment but that is all.

I got a few reports on the 1992 presentation with enough of the defense side to use.  
Thanks again for what you sent me and for any other help you may provide.

Sincerely,  
  
Harold Weisberg



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October 7, 1993

**Re: Your Request for Information**

Mr. Harold Weisberg  
7627 Old Receiver Rd.  
Frederick, MD 21702

Dear Mr. Weisberg:

Thank you very much for your letters dated September 17th and September 29th. As we received both letters within the last two days, any delay in our response has been a function of the Post Office.

I am familiar with your work having read your books last year during our trial preparation for the American Bar Association (ABA) Section of Litigation's Mock Trial, " U.S. vs. Oswald". In fact, your work resides in our in-house library. With your permission, I would like to spend the next portion of this letter describing to you the background of our work for the ABA Mock Trial so that you are more familiar with why we created these animations and why they are being utilized so much now, in the 30th anniversary year of the JFK assassination.

**Background to the Investigation**

Failure Analysis Associates, Inc. (FaAA) is the nation's leading consulting firm dedicated to the investigation, analysis, and prevention of failures of an engineering or scientific nature. Our work is well-known throughout the litigation field and we pride ourselves in utilizing the most state-of-the-art techniques in engineering analysis and demonstrative evidence preparation. This is why we were contacted by the ABA.

In March, 1992, members of the Litigation Section of the ABA approached FaAA to assist with a Mock Trial Presentation for their 1992 Annual Meeting in San Francisco later that year. The ABA asked FaAA to provide expert witness testimony for both sides of the litigation - a first for our organization. We were also asked to provide all demonstrative evidence (courtboards, video, graphics, and computer animation) After much discussion, the decision was made to put Lee Harvey Oswald on "trial" at the event. Please be advised that this was a Mock Trial designed to **educate** attorneys on proper trial techniques as well as the use of technology to display demonstrative evidence. This trial was not used as a forum to prove or disprove that Oswald killed President Kennedy.

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### **Trial Preparation**

It was determined that the Prosecution would consider the following issues: The Magic or Tumbling Bullet Theory, Injury Analysis, and Path Trajectory of the Bullets. The Defense team, of which I was a member, concerned itself with Ballistics, Other Potential Firing Positions/Assassins, as well as "shooting holes" in the Prosecution's case. Both sides utilized the following background information: Warren Commission Report, House Select Committee Report, "Crossfire" as well as a copy of the Zapruder Film. In addition, either side could acquire additional materials if necessary, if approved by the other side. That is how we acquired your books. Latimer's medical work was also used extensively and we had many discussions with Larry Howard in Dallas as well.

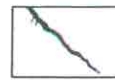
### **The Prosecution**

The work that the Prosecution team presented you have seen in Posner's book. The lead member of the team was Dr. Robert Piziali, a V.P. and Manager of our Biomechanics Group. Injury analysis was performed using information provided in the record as well as photographs that have appeared in numerous books and articles. The Zapruder film was enhanced and each frame captured as a still to analyze the movements of the vehicle's occupants. During this analysis, the Prosecution was able to detect movement in the lapel flap on Governor Connelly's jacket which prompted them to associate this with the timing of the first/second shot. Frame by frame analysis was also used to determine timing sequences for the firings of the three bullets.

FaAA obtained aerial photographs of Dealey Plaza as well as photographs of each building in the Plaza to assist in the creation of the computer animation of the area. The data was precise, most likely within an accuracy of approximately two inches. Using this information, the potential entry point of the President's head wound, photogrammetric positioning of the Governor and the President as well as reverse projection techniques, the Prosecution located the positions of the two men in the vehicle and then related the injury positions in the bodies. In this way, the trajectory of the bullet, i.e., the cone that you see in Posner's book, could be estimated. As you can see, there is not a straight line trajectory, but a cone, to incorporate the  $\pm$  accuracy of the analysis. As the cone happens to take in all of the 6th floor window, the prosecution used this to build a strong case.

### **The Defense**

We were able to obtain a Mannlicher Carcano rifle and bullets from the same lot that Oswald was alleged to have fired. We concentrated on his ability as a marksman to make that shot; the quality of the weapon utilized, the "better shot" available as the vehicle moved toward the 6th floor on Houston Street; and the timing sequence of shots.





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To do this analysis, we instrumented the weapon in all directions so that we could monitor the gunman's head movement as well as the rifle movement when the shots were taken. Dr. McCarthy, our CEO and a expert shot, performed the experiments as well as provided testimony during the trial. We were able to produce timing sequences that corresponded to the sequences found by the House Select Committee investigation as well as the Warren Report. In addition, we obtained skulls and attempted to reproduce the "pristine bullet". In one or two instances, a slightly damaged bullet was obtained, in others, it was heavily damaged. Dr. McCarthy also looked at using other weapons, as well as other ammunition, which might have used to make the shots. We also located positions on the grassy knoll where witnesses alleged to have located the sounds of gunfire. In this way, we developed a "killing zone" - i.e. the first shot was taken from the 6th floor, then the vehicle moves into the "killing zone" location and the other gunmen have better shots. Remember, all we needed to do was put "doubt" in the jury's mind with regard to the facts of the case. The Prosecution had the burden of proof.

### **The Trial**

We produced all demonstrative evidence for the trial - graphics of the scene, aerial photographs of Dealey Plaza, video of our tests, and three-dimensional animations of the Tumbling Bullet, Fly-Around of Dealey Plaza, Timing Sequence of Shots, Killing Zones, etc. The enclosed tape has a review of the trial. We hope that, as you requested, the tape will be housed in the Hood College library so that students many look at it and gain understanding on how technology can be utilized in the courtrooms of today (and the future).

The trial lasted 16 hours (2 days). It was attended by well over 500 people. We had a real jury, picked from San Francisco residents. The jury, and a shadow jury, were monitored real-time for their responses by jury consulting experts from DecisionQuest. These juries were not able to see their reactions, but the audience was. The trial was presided over by some of the most senior judges in the country, including two Federal Court Judges. Other participants besides Dr. Piziali and Dr. McCarthy were Dr. Cyril Wecht and Dr. Martin Fackler. In additions actors and members of the FaAA staff acted as witnesses. The trial resulted in 7/5 split by the jury. 7 to convict and 5 to acquit. I have enclosed a copy of the program from the event for your review of the participants.

### **After the Mock Trial**

We were very pleased with the success of the Mock Trial and the materials that we produced. At present, a continuing legal education (CLE) video tape is being produced by our organization for the ABA and its members. Everyone here has their own view of whether or not Oswald was responsible for the death of the President, but FaAA takes no



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position on this matter. It is my understanding that Mr. Posner contacted Dr. Piziali after he saw the COURT TV show. I am not aware of what was discussed, but Mr. Posner apparently thought the prosecution's case was worth discussing and informed Dr. Piziali of such. Thus, Dr. Piziali gave approval for him to utilize their work for his investigation. We were unaware of Mr. Posner's investigation results until we saw the **US News and World Report** article last month (enclosed for your review). I have read the chapter in "Case Closed" which acknowledges the work of Dr. Piziali and his team. It is, however, a bit confusing as to the understanding that the work was done for the ABA and not Mr. Posner.

Since FaAA has not proved, or disproved anything with regard to the person (or persons) behind the assassination, we have therefore decided to make no public statements with regard to Mr. Posner's book. We leave it up to researchers, like yourself, to analyze all the facts, and myths, and draw conclusions that the rest of us can learn from.


We have received many inquiries from the national media and have been fortunate to have much of our work shown on the national networks because of Mr. Posner's reference to FaAA. If there is confusion on the part of the media when they request information from us, we correct their confusion with regard to who we performed the work for.

I hope you found this information useful and I wish you much success with your manuscript. When it is published, please let me know so that I can obtain a copy. With regard to your colleague who's request was apparently ignored, I can only tell you that I am answering each inquiry personally. Our work product is confidential and not normally distributed to the general public. It is highly unlikely that we would have deliberately ignored his request. Please have him contact me directly to discuss his request.

If you have any questions, please feel free to contact me directly at 415-688-6951.

Thank you again for your inquiry

Sincerely,

  
Angela A. Meyer, Ph.D., P.E.  
Manager of Client Services

enclosure: JFK Materials

.cc: Dr. Roger McCarthy (w/o attachments)



## FAILURE GROUP

■ What makes a good company go bad? Failure Group in Menlo Park, California, was born 23 years ago when five Ph.D.s got together, each pitching in \$100, to figure out foul-ups. Using physical reconstructions and computer graphics, Failure Group's 270 degreed professionals (80 with Ph.D.s) will unravel any serious accident involving science or engineering. It was called in to investigate the shuttle *Challenger* explosion in 1986, Suzuki Motor's Samurai safety flap in 1988, and the Phillips Petroleum plant explosion near Houston last year. Now it is investigating the August fire that halted trading at the American Stock Exchange. The average job costs about \$20,000 (time plus materials), but some run as high as \$4 million. The stock recently traded at \$16.13, 17 times estimated 1991 earnings per share, according to portfolio manager Paul Wick of J&W Seligman in New York. Last year didn't seem all that catastrophic, but for some companies it must have been: Fiscal 1990 revenues rose 26% to \$60 million, and profits 25% to \$5 million.



# MANAGER'S JOURNAL

COMPUTER WORLD 2-15-91

## Technology succeeds at Failure

*IS helps Failure Analysis discover why things go 'boom' in the night*

BY MAURA J. HARRINGTON  
CW STAFF

After the North Sea oil platform Piper Alpha exploded and burned off the coast of Scotland in July 1988, killing 167 people, Failure Analysis Associates, Inc. in Menlo Park, Calif., was called in to investigate the tragic accident — and to apply a lot of information technology in doing so.

Failure Analysis is a research firm that analyzes explosions of cars, trains, airplanes and helicopters, as well as engine failures, breakdowns in nuclear power plants and missile systems and other engineering disasters. The \$60 million firm also tests consumer products for possible defects before they reach the market.

"Computers are used for about 90% of everything we do," says Roger McCarthy, chairman of Failure Analysis. For example, the company's 15 years of research into automobile accidents is stored in an object-oriented database containing more than 50 million automobile accident records. The company claims its database is the largest single collection of accident information in the U.S.

### Dummy crash

When conducting an analysis of a car crash or when testing a car's durability by test-crashing it (which accounts for almost 50% of the company's business), the company uses specially designed computers attached to dummies

and to the automobile. The computers measure everything going on during the test crash, from the impact of the dummy's body against the windshield to the fluid dynamics in and around the car at the time of the explosion.

After the analysis is completed, all the information is stored in the database, which includes animated graphics and video used for further study, says

technology equipment in the hope of finding the reason the usually bizarre or unexpected failure occurred.

Because Failure Analysis' work is so specialized, most software is developed in-house, as is some high-technology analysis equipment for certain uses. An internally developed, solar-powered monitoring unit was used to test the groundwater in a small Midwestern

town located near a nuclear facility, for example.

"One of the things that distinguishes us from our competitors is that everything we study is backed up by scientific facts and figures," principal engineer Paul Johnston says.

### Needle in a haystack

Failure Analysis used a scientific formula called finite element analysis to determine that a leak in a 22-ft wide Pacific Gas & Electric Co. pipe was the result of a crack.

While it may seem easy, Johnston says that looking for a crack in such a large underground pipe is like looking for a needle in a haystack.

"This type of work is perfect for computers . . . in fact, it couldn't be done without computing technology," Johnston says.

Founded in 1967 by five engineers with just \$500 in capital, Failure Analysis went public in 1988 and reported revenue of almost \$60 million in 1990. With no advertising budget, the company relies on its engineering expertise and word of mouth for all of its business.

While Failure Analysis' reputation  
*Continued on page 70*



Cindy Charles

**Failure Analysis' Subbaiah and McCarthy see leading-edge technology as vital to their business**

Malladi Subbaiah, senior vice president at Failure Analysis and head of the computer systems department.

At Failure Analysis' 160-acre test and engineering center in Phoenix, engineers imitate an accident by reconstructing and blowing up the product or site. To record the accident or failure as accurately as possible, engineers use high-definition video and other high-

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## Failure Analysis

CONTINUED FROM PAGE 63

for accuracy in its research has spread throughout the years, it was the advent of the personal computer that really gave the company the boost it needed to expand, McCarthy says.

"When I first got to this company in 1978, there wasn't a single computer here," he says. "About half the staff used computers for scientific work back then, but they used Stanford University's IBM 3081 mainframe for everything."

It wasn't until 1982 that Failure Analysis purchased its first computer, a Digital Equipment Corp. VAX 11/750 with 16M bytes of memory, McCarthy says.

Now the company has more than one computer per employee and has invested almost \$11 million in hardware and software. Failure Analysis has more than 500 employees throughout its Menlo Park headquarters, a test site in Phoenix and several offices in the U.S. and abroad.

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**T**O RECORD THE accident or failure as accurately as possible, engineers use high-definition video and other high-technology equipment.

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Desktop systems installed at headquarters include hundreds of Intel Corp. 80386- and I486-based IBM Personal Computers and compatibles, Apple Computer, Inc. Macintosh computers, Hew-

lett-Packard Co. workstations and Sun Microsystems, Inc. Sparcstations.

There is also a Vaxcluster with five VAX systems, an IBM 3083 mainframe and a total of 64G bytes of hard-disk storage. Much of the memory on the IBM 3083, Subbaiah says, is used as storage space for Failure Analysis' clients using the company's newest service, a customized computer information system.

This application allows Failure Analysis to act as a specialized IS management company. Failure Analysis takes a client's data and organizes it with cross-references for every piece of data so the client can find virtually anything with a one-word search, Subbaiah says.

"It is not uncommon for our system to have 100 clients accessing their customized systems that are stored in our IBM mainframe at any given time," McCarthy says. Clients who subscribe to the special program can also access information on the company's internal databases, which include 15 years of data in some cases.

Because Failure Analysis depends on computers for virtually everything it does, it is perhaps more willing than most companies to rely solely on computers to get the job done. That way of thinking has led to some pretty ambitious goals for IS. McCarthy says that within five years, he would like to eliminate paper altogether.

"We're toying with the idea of having a high-end workstation — possibly reduced instruction set computing-based — on every employee's desk, connected to a centralized network with shared data resources," he says. "Each of the networks in our offices would then be connected to an overseeing mainframe center.

"Our philosophy here," McCarthy adds, "is that if it's on paper, it's lost."

FEBRUARY 18 1991