

THE URGENT NEED FOR SPECIALIZED TRAINING IN MOTOR VEHICLE ACCIDENT INVESTIGATION AND RECONSTRUCTION IN SOUTH AFRICA

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ABSTRACT

Why do we investigate traffic accidents? What is the current state of accident investigation in South Africa? Is there a need for the investigation of serious traffic accidents? What technology is available to assist the investigators and what are the plans for the future?

The purpose of this paper is to provide insight on the current level of accident investigation in South Africa. The current level of investigation in South Africa, with one of the highest accident rates in the world, is far below the level of other countries, for example Canada and Australia. There is a lack of institutions providing courses in accident investigation and reconstruction of accident. The technology is available, but it is not used in South Africa.

This paper will show, with the use of three-dimensional computer software (Vista FX), how a reconstruction of a fatal accident was done to determine the cause of the accident, the way it was presented in court and the outcome of the court case.

Plans for the future:

University accredited courses in Accident Reconstruction, consisting of three parts namely:

1. The Investigation of Serious Traffic Accidents.
2. Vehicle Dynamics and Driving Dynamics.
3. Accident Reconstruction and Cause Analyses.

1. INTRODUCTION

South Africa's road safety rate ranks as the fourth worst in the world, but very little is done to rectify the problem. Just look at the following statistics:

The cost of traffic accidents in South Africa is approximately R16 billion rand per year. Road accidents are rank as the world's third greatest public health problem, superseded only by aids and tobacco related illnesses.

There are approximately eight thousand traffic officers in South Africa of whom five thousand are operational. The other three thousand deal with licenses and office work or are sick or on leave. Twelve thousand SAPS officials are directly or indirectly involved in attending to accidents on a daily basis. Annually 14 560 people are killed on South Africa roads (40 per day), 38 000 persons are seriously injured (104 per day), 84 000 persons are less seriously injured (230 per day), and 620 000 accidents occur with no injury to persons (1698 per day). A person is killed every 48 minutes as a direct result of a motor vehicle accident.

In order to prevent motor vehicle accidents, the causes contributing to accidents must first be determined. All such causes should be based upon reasonable probability, considering driver, vehicle and environment factors. In order to find these causes, investigators (traffic, police, metro) must be properly trained in the investigation of motor vehicle accidents.

Compared to other countries, for example America, there are five universities that present courses, diplomas and degrees in accident investigation.

1.1 What is the current state of accident investigation in South Africa?

Lets compare two cases of manslaughter where negligence was the cause:

A police officer is off duty. He sits in his bedroom and cleans his fire-arm. While cleaning it, a shot goes off. The bullet strikes his wife in the head, killing her instantly. The police is phoned. They arrive and cordon off the entire property. A detective is summoned to the scene. He/she then calls the police photographer. Fingerprints of the police officer (suspect) are taken. His fire-arm is confiscated and sent for ballistic, forensic investigation. It sounds like an episode of CSI Miami.

During the above-mentioned incident, a minibus taxi collides with a Toyota Condor on the N1 just outside Beaufort-West. Twelve people are killed in the accident. An untrained, inexperienced police officer attends to the scene, usually a low ranking officer. He/she has to obtain all the evidence on the scene without the necessary equipment. If he is lucky a police photographer will be available to take the photographs. The scene is measured by stepping off the distances, due to no measuring tape being available. The point of impact cannot be determined by the officer. The vehicles are not handed into the SAP13 as evidence to be inspected for mechanical defects. In this case twelve people died due to the negligence of somebody, but it is not investigated as thoroughly as the first case. Why? Is it a case of lacking the proper training or is there a lack of will?

1.1.1 Examples of the current state of accident investigation in South Africa:

UCT and Kloofneck bus accidents:

Two weeks prior to the Kloofneck bus accident there was another accident on De Waal Drive involving a bus from the University of Cape Town (UCT). This bus was used as the official transport for students and staff of UCT. I was appointed by UCT to investigate and reconstruct the accident. The cost for such reconstruction can easily reach R50 000. While I was busy with this investigation, the Kloofneck accident occurred. Mr. Stan Bezuidenhout of IFBI (Independent Bureau of Investigations) went to the scene and took over 200 photographs. However both the SAPS and Traffic Police prevented him from continuing his investigation.

Mr. Bezuidenhout compiled a report, free of charge and sent it to the Western Cape Minister of Transport, clearly showing that the bus was not roadworthy. The Minister on the other hand appointed a task team which later stated on national television that their investigation has found that the bus was roadworthy and only lacked a transport permit.

Above raises some serious questions:

1. Why are private companies (accident experts) hired to investigate motor vehicles accidents and are paid thousands of rand, if it is the function of the SAPS and or Traffic/Metro Police?
2. Are the SAPS and or Traffic/Metro Police not trained well enough or;

3. Is there a lack of interest from the Government?

The Government is under obligation from the Constitution to provide a safe environment to live in. This does not only include crime, but also the protection against injury or death as a result of motor vehicle accidents.

4. How can accidents be prevented without knowing the causes of these accidents?

That leads to the next question:

5. Big companies can afford to pay large amounts of money for private experts, but what about the average man on the street?

He is solely/totally reliable on the SAPS to investigate the accident he was involved in. He has to accept the outcome of the investigation, even if it was done by untrained personnel, lacking the necessary skills. This point was proven with Kloofneck bus accident.

Another question is:

6. Why a private independent investigator was refused access to the accident scene?

7. Does any person that has personal interest in an accident for example family, the owner of the vehicle or insurance companies not have the right be on the accident scene and carry out their own investigation?

Durbanville intersection accident:

In another example in Durbanville, a women traveling in a combi, died two weeks after an accident and her husband that was a passenger, was left wheelchair bound with severe brain damage. The police visited the accident scene. An experience officer, an Inspector, was in charge of the scene. Again he did not have the necessary equipment. The scene and the vehicles involved were never photographed. Neither were the vehicles involved

handed into the SAP13 as evidence. The driver of the other vehicle, a Volkswagen Golf, left the scene before his blood sample could be taken, although he was under the influence and his name and address was obtained before he left the scene. The

passenger in the Volkswagen Golf was according to him, asleep and could not remember anything about the accident. The driver stated that he was driving inside the speed limit of 60km/h when the combi suddenly drove in front of him from a side street over a stop. There were no other witnesses that saw the accident happened. The witnesses only arrived after the accident happened. A warning statement was not taken from the driver of the Volkswagen Golf.

The family of the deceased brought myself in as expert. I was able to calculate through the use of ninety degree momentum calculations, the pre-impact speeds of both vehicles. The pre-impact speed of the Volkswagen Golf was determined at a minimum speed of 164km/h. The driver of the Volkswagen Golf was the charged for manslaughter.

During the trial, the two witnesses who arrived on the scene shortly after the accident, both testified on the positions of both vehicles after the accident. They differed from each other as well as from the police officer that draw the accident scene plan, remembering that the

scene was once again not measured with a type but was stepped off. In order for me to calculate the pre-impact speeds of both vehicles, I needed the position of the gravitational centre points of both vehicles at impact, the position of the gravitational centre points of both vehicles at their final rest positions and the angle between the impact positions and the final rest positions. The judge ruled that due to three different opinions of the rest positions of the vehicles, it was impossible for him to determine which rest position was the correct one and because my calculations was based on the final rest positions as indicated on the police plan, my calculations could not be accepted as correct due to it being based on evidence that was not supported by the evidence of the witnesses. The case was subsequently withdrawn against the accused.

2. SOLUTIONS TO THE PROBLEM:

I have a passion for accident reconstruction and cause analysis. I am currently the Head of the Accident Investigation and Reconstruction Unit of Stellenbosch Traffic Services. Personal of my unit are on 24 hour standby to attend to serious traffic accidents. Photographs are taken on the accident scene with the vehicles involved in there undisturbed positions. Photographs are also taken of the damage to vehicles and other objects. The scene is measured using a type measure. The vehicles involved are impounded for forensic mechanical inspection including light bulb analyses. A scale plan is drawn of the scene. I am used by the justice department in Stellenbosch as expert and often testify in criminal and civil cases. My testimony is also used in inquests. Through co-operation between the Stellenbosch Traffic Services and Stellenbosch SAPS, Stellenbosch Traffic Services has become one of the leaders in Accident Investigation and Reconstruction in South Africa. Internal practical training is provided on a daily basis. This co-operation has reduced the burden on the SAPS detectives who can now concentrate on the investigation of other serious crimes.

Above raises another question:

8. Why doesn't the same co-operation between other Traffic Departments and SAPS exists all over South Africa?

I have compiled two courses on accident investigation and reconstruction that have been accredited by the University of Stellenbosch . These course were introduced to both

Municipal and Provincial Traffic Police. Although there is a huge demand for the courses from traffic officers, some were even willing to pay for the courses out of their own pockets, they were told by their superiors that the investigation of motor vehicles is not their core function.

This raises yet another question namely:

9. What is the core function of Traffic Services? Isn't it to prevent motor vehicle accidents?
10. How can motor vehicle accidents be prevented if the causes of the accidents are not known?

In order to find the causes of motor vehicle accidents, it must be investigated thoroughly.

I am currently very frustrated and disappointed in the Government's lack of interest in reducing motor vehicle accidents. More people die annually as a result of motor vehicle accidents than any other crime. Fewer people die statistically of aids every year than as a

result of motor vehicle accidents. Each year, from 1997 to 2002, HIV was recorded as a cause of death in fewer than 11 000 cases. However shortly before the government report was released, the Medical Research Council of South Africa (MRC) published an article which claims that the majority of certified deaths as aids or HIV related, are misclassified. Compare the 11 000 cases to the 14 560 persons that are killed on South African roads annually (40 per day).

Large sums of money are pumped into aids research and prevention, while very little is done in the prevention of accidents and in accident investigation and research on accident causes.

I think that the government, in order to drastically reduce the number of accidents on our roads, needs a priority shift. Somebody needs to be kept accountable. This can only be achieved through the necessary funding and training of Traffic Officers, Metro Police and Police Officers in accident investigation and providing them with the necessary equipment. One of the best computerized drawing software currently available is Vista FX. It can draw accident scene diagrams in minutes as well as generate the scene in 3D.

It must be taken into account that not just the rich and famous can be involved in motor vehicle accidents and in order to get closure it is the right of everyone who has lost a loved one in a motor vehicle accident, to know what exactly happened.