THE QUERY REPORT

European Association for Accident Research and Analysis

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www.EVUonline.org
What is the EVU?

The EVU is the association of accident researchers and reconstructionists throughout Europe.
Which tasks has the EVU set itself?

- EU-wide harmonisation of the reconstruction’s professional profile to an appropriate standard
- European standards for certification
- Exchange of knowledge
- Establishing knowledge bases on the Internet
- Accessibility of affordable crash tests
- Basic and further training for its members
- Adequate remuneration
The QUERY Project

Developing Guidelines for a 'Best Practices' Qualification of Accident Reconstructionists

Partners from 25 countries
QUERY - timeframe

• 1.07.04 project launched
• 4.11.04 1st meeting, Budapest
• 30.09.05 interim report to the EU
• 20.10.05 2nd meeting, Bratislava
• 30.06.06 evaluation and publication
• 30.09.06 final report to the EU
Why should accidents be analysed?

• prevention: punishment of culpable action
• just distribution of civil law costs
• compensation - immaterial damages adjusted to the level of guilt
• improvement of vehicle safety
QUERY - Advantages for Europe

- harmonised standards
- internet database of highly qualified specialists
- improved exchange of knowledge
- same legal security in all countries
Summary of the project
Definition of Professional Profiles

*Accident reconstructionists* reconstruct the unfolding of an accident on the basis of objective evidence (hired by courts of law or by disputing parties, such as insurance companies)

*Accident researchers* are less concerned with the reconstruction of traffic accidents than with the actual unfolding of an accident (passive or active safety of vehicles)
Differing professional profiles within the EU:

- engineers or physicists in DE, AU and Eastern European countries
- mainly police officers in the Western European countries
- Scandinavia, NL, GR: only very few experts
- mixed in the UK: both academics and (retired) police officers
The QUERY Project

Content

- 25 Country Status Reports
- Statistics – Detailed Results of 135 Questions
- Translation of the Proposal into 19 EU-languages

www.ec.europa.eu
A eight point proposal for European Guidelines in Accident Reconstruction was set down
1. Accident Scene Examination vs. Reconstruction

A distinction should be made between

*accident scene examination*
(the collection of evidence and data at the scene of an accident), *and*

*accident reconstruction*
(the use of scientific methods for the purpose of drawing conclusions from the evidence gathered at the scene of an accident).
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Results of the Questionnaire

94) In which cases would an expert be regularly called to the scene?
   (multiple answers possible)

A: in the event of death or serious injury
B: when fault cannot be determined, i.e., when it is unclear how the accident occurred
C: in case of alleged technical fault of a vehicle involved in the accident
D: to determine which of several occupants had been driving the vehicle
E: other

90) Can a reconstructionist be called to the scene of an accident?

Yes: 100%
No: 0%
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Results of the Questionaire

91) If so, by whom is the expert called to the accident scene?
(multiple answers possible)

- A: the prosecutor
- B: the police
- C: other *

*other: ES, SE: road traffic administration; CY: insurance co’s, lawyers,
CH: except for very few exceptions, expert never called to scene
In which of four occurrences a reconstructionist would regularly be called to the scene.

- 68% in the event of death or serious injury.
- 27% when fault cannot be determined.
- 36% an alleged technical
- 4% which of several occupants had been driving the vehicle.
1. Accident Scene Examination vs. Reconstruction

Accident scene examination is - in most of Europe - carried out by police officers with specialist training.

The second type of work, which we shall call accident reconstruction, should be performed by persons with an academic qualification.

Its professional profile should be distinguished clearly from that of the former.
27) How strongly do you agree with the following statement? 'Accident reconstructionists must have a suitable academic qualification'
1. Accident Scene Examination vs. Reconstruction

NL and GB, both with a system of accident data collection and analysis by the police, do not agree with academic requirements:

There, suitable training should be provided.

The British Police themselves state in their *Road Death Investigation Manual*: 
‘Where an investigation is particularly complex, or it involves the application of physical laws or complex mathematics, (...) the evidence must be validated by an appropriate expert (whether a police officer or otherwise) who has the necessary knowledge and experience.

In such cases balance must be drawn between those who possess academic qualifications and those with essential practical experience.’
While some countries, such as the UK, usually use one expert for each party in a trial, it is most common within the EU to use only one, ‘joint‘, expert.

Especially in the use of one singular, 'joint‘, expert in a trial, severe demands are made on his/her qualifications and moral integrity: the lay person has to rely on the conclusions drawn.
A system of quality needs to be established to guarantee quality and moral integrity.

A protected title, as well as a stamp or seal, should be given to persons certified by this system (cf. medical doctors, lawyers).
3. Accident Scene Examination

Gathering evidence at the scene of a severe accident carries a lot of responsibility, and requires specially trained personnel.

However, an academic qualification is not required. With suitable training, a ready-made list of guidelines and requirements can largely be relied on.

A (partial) reconstruction of the accident scene may, in complex cases, aid the gathering of evidence, and thus call for the attendance of a reconstructionist.
4. Qualification

- Profound knowledge of physical and technical principles necessary
- A degree in mech. engineering, physics or comparable is a must
- Further experience: theoretical (post-grad.), practical (min. 3 yrs experience in the field)
- Driving licences: class B a must, class A and C1-CE recommended (-> driving experience)
5. Certification Process

- an examination should be part of the certification process
- exams should be carried out by a limited number of accredited institutions
- training and examination by one and the same institution must not conflict with financial interest
- certification should be time-limited, to be renewed approx. once every 5 yrs
- it must be possible to withdraw a certification in drastic cases
6. Technical Knowledge

Specialist knowledge in the field of accident reconstruction should comprise:

- collision mechanics
- time-distance calculations
- basic knowledge of crashworthiness
- technical aspects of injury biomechanics and injury mechanics
- basic knowledge of human factors
- vehicle technology, especially concerning steering and braking systems as well as vehicle dynamics
6. Technical Knowledge

• basic knowledge of simulation techniques
• basic knowledge of repair technologies and repair cost calculation
• technical proof of insurance fraud
• digital photography and digital imaging techniques (correction/manipulation of images)
• road infrastructure
• basics of criminalistics and interpretation of evidence
• as well as all knowledge required to carry out accident scene examination
7. Remuneration

The remuneration of the reconstructionist when hired by the court should be adequate, i.e. comparable to that obtained on the free market.
In many European countries, there is no clear distinction between the profession of repair costs estimation and that of accident reconstruction. This situation is facilitated by occupational titles such as 'vehicular expert'.

In repair cost estimation, judgement is required on the ‘final state’ (the damaged vehicle as it is).

In accident reconstruction, however, it is usually necessary to determine dynamic processes (for instance the approach of the vehicles to the collision point).

Particularly this dynamic approach is what distinguishes it from other fields of vehicular expertise.
These 8 points comprise the proposal, which, along with a detailed evaluation of our standardised questionnaire, have been published and sent to the DG TREN of the EU.
Summary for SafetyNet

• A clear distinction should be made between Accident scene examination and accident reconstruction

• For accident scene examination a suitable training, guidelines and requirements is required.

• Accident reconstruction should be performed by persons with an academic qualification

• In most german-speaking and in the east-EU countries nearly every serious accident is reconstructed – this data could be used for safetyNet
Thank you for your attention