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**Hand Held Device for Roadside Screening Procedures, Incident Reporting
and Other Police Applications**

1. Introduction

"...High on the Audit Commission's list was the need for computers and software to free [Police] Officers from the mind-numbing task of filling in and keeping track of reams of paperwork. For example one [London] Metropolitan Police Officer reported filling in the same details on 13 different forms.....". This article from the United Kingdom "Computing" magazine, 1995, sums up in two sentences the situation as it was in 1995, and as it still is now in the year 2001.

In the U.K. the majority of Police time is spent attending incidents such as; "My cat is stuck up a tree", Domestic violence, Road Traffic Accidents and of course Drink Driving incidents. Each incident under UK law has a set form to fill in, and of course a set procedure to go through, especially in the case of Drink Driving. Each procedure is meticulously documented, and used for both evidence in Court, and for statistical purposes for the Government's use.

2. Historical Overview

In 1899 at Crystal Palace, London, England, the first fatal road accident occurred. In 1926 The first formal Police records of traffic accidents were recorded. In 1948 the first systematic investigation into accidents was instigated by the Metropolitan Police [London]. In 1949 the national collection of road traffic accident data commenced, but each force in the UK created it's own form and it's own procedure. The data became known as "STATS 19" after the standard reporting form used for it's collection. In 1959 The Metropolitan Police Motor Driving School at Hendon, England, established "Traffic Law" and "Vehicle Examination" courses. In 2000, Superintendent David J. Rowe, U.K Police Liaison Officer for the Department of Environment, Transport & the Regions (DETR), and the National Drink & Drugs Liaison Office for the Home Office, London, commenced work on a national form for collection of STATS19 data.

Although there are some 51 Police forces in England, Scotland, Northern Ireland and Wales (The United Kingdom), historically all forces control their own budgets, use different procedural documents and run different computer systems. In 1989, a Police Custody Computer system was written and developed to conform with the 1984 Police and Criminal Evidence Act (PACE). This system was introduced to The Wiltshire Constabulary at Swindon Police Station in England and was a resounding success. The system included programs for "Charge Preparation", "Standard Document Production", "Prisoner Disposal", "Historical Record", "Solicitor (Lawyer) Index", "Warrants Index" and many other items which helped with automating Police Custody Procedures. However, there was one procedure that was not initially computerised – the Station Procedure for drink/driving.

Due to massive amounts of case law, some UK drink/drive procedural forms were some 56 pages in length. Wiltshire Constabulary were alarmed at the amount of subject acquittals on procedural technicalities even though the subject was well over the legal driving limit at the time of the incident. Mr. Nigel Ley a Barrister-at-Law and Member of the RAC legal Committee in the UK stated in his book *Drink Driving Law and Practice*, "What happens so many times is that the [drink/drive] procedure is not followed completely and defences are thereby enabled to be raised, artificially or otherwise, in cases in which, having regard to the justice of the matter, in truth there should be no defence at all."

The logical next step was to computerise the Wiltshire Constabulary Drink/Drive Procedures. The computerisation of the drink/drive procedures went live in May 1990 and were a resounding success. Bearing in mind the evidential importance of the procedures and the subsequent print-outs, it was felt essential to receive approval of the system from the UK Crown Prosecution Service (CPS). In June 1990, a member of the Policy and Communications Group of the CPS wrote to the Wiltshire Constabulary and said:-

"...it is felt that the particular benefits of the system from the Prosecution point of view are the reduced scope for errors, the very clear printout and the deletion of irrelevant material. ...The project therefore has the full support of the CPS."

In 1997-1998, Superintendent David Rowe and other members of the Association of Chief Police Officers (A.C.P.O) developed a set of national forms for drink driving procedures. The forms became known as the "MG/DD" Forms. "MG" or Manual of Guidance, is the England and Wales National Mandatory Prosecution guidance forms for Police and Prosecutors. These are issued through a group called the "Trials Issues Group". It consists of people from The Home Office, CPS, and the Police. It is mandatory for all police forces to use these forms for drink/drive procedures. The forms consist of set procedures for:-

- Roadside Screening Breath Test Procedure
- Drink/Drugs Station Procedure – General
- Drink/Drugs Station Procedure – Specimens/Impairment Supplement
- Drink/Drugs Hospital Procedures
- Alcohol Technical Defence Form
- Drug Sample Information Form
- Impairment Assessment – Section 4 Road Traffic Act 1988

After retiring from active Police duty in December 2000, David J. Rowe became "Principal Consultant" for Police Systems at ACS Business Systems Limited (ACS) in the UK.

4. Police Software Systems

ACS's **DDsoft**[™] system, computerises the national UK Drink/Drive MG/DD Forms. In the UK, **DDsoft**[™] links electronically to the Lion (CMI) Intoxilyzer[®] 6000 and Lion (CMI) Alcolmeter[®] SL-400 Series breath testing devices. The **DDsoft**[™] Station procedures are PC based programmes with links through to Police Custody Systems and Magistrates' Courts.

The Benefits of the system can be outlined as follows:-

- Data Entry is Minimised
- Eliminates errors in procedure by automatic guidance through the breath test procedure
- Speed up procedure by Automatic Data Exchange with the Lion (CMI) Intoxilyzer 6000
- Eliminates manual pro-forma filling
- Clear laser printed documentation
- Statistical download facility for the Lion Alcolmeter SL-400 screening device

ACSident[™] computerises the procedures for the collection of data for Accident Reporting and other procedures for use with STATS19 data collection.

In the development of **ACSident**[™] and certain procedures within **DDsoft**[™] however, it was felt that a hand held roadside device would be the ideal tool for today's Police forces. After exploring many avenues, ACS finally came up with a Microsoft Windows CE based hand held device called an FEX-21. This device has been built to stand the rigors of today's heavy duty Police Requirements. It's lightweight Open Book Design case, has been designed for Police Officers to hold via either left or right handed back strap, or can be vehicle or desk mounted.

ACSident[™] is currently under development for trial in a Major UK Police Force. Police Officers from the initial Trial Force will be able to attend the scene of an incident and will by pressing an icon with his or her finger, fire up the required application for the following procedures:-

- Accident Recording
- Incident Reporting
- Crime Reporting
- Roadside Screening Breath Test Procedure
- Hospital Drink/Drugs Procedure
- Impairment Assessment Procedure

Using the Global Positioning Satellite (GPS) system, the location of the Accident, Screening Breath Test procedure, Hospital procedure and other procedures, can be pinpointed exactly, for statistical analysis at a later date. The data then becomes available for later download/analysis at Police headquarters. It is then analysed for collection of statistics as required by each individual Police Force/Government.

In 1998, Superintendent David Rowe produced a paper called "*A new system for recording contributory factors in road accidents*". In the paper he deals with the Road Accident being the tip of an 'iceberg'. To enable local authorities and other interested parties to analyse for example what went on say 100 Metres down the road to cause the accident to occur, a new form has been developed for pilot study called "*Accident Causation Coding Pilot*" (copy attached). It may be that there is a certain location where accidents always occur, and by analysis of the data taken at the scene, it could be found that there was a Pub/Bar 100 Metres from the accident black spot where people are getting into their cars and driving while under the influence of alcohol. The Police can then record this, analyse the data, and take the relevant steps to prevent this from happening in the future.

A new national Accident Recording form is currently being developed, which will be introduced to all forces in the UK by 2004. An integral part of the new national form will be the Accident Causation factors. **ACSident™** is being developed on the FEX-21 hand held device, based on the new national form, and it is envisaged that this will become the UK national system for Accident Recording.

4. Conclusions

It is essential in this day and age, to minimise the amounts of paperwork that Police Officers have to trawl through as part of their daily work routines. Computerising as many of these procedures as possible, is the logical way to achieve this goal. Statistics have become a major part of Police Force requirements. Accurate statistics are not always possible by manual paper methods. Collecting statistics by computer gives a far more accurate means of collecting the relevant data, and by electronic data capture, cuts down considerably, the amount of paperwork required to be filled in by Police Officers.

It has already been proved in the UK that computerising drink/drive procedures have significantly reduced subject acquittal on procedural technicalities to almost zero. As a result of this there has been a significant reduction in both Legal costs and Police time.

Roadside hand held devices are the next generation of computer systems, to take that approach one step further. **ACSident™** and **DDsoft™** are the pioneering software systems that will achieve this in the UK and the rest of the world.

References

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