

# Electronic Footprints

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Investigators are turning to technology to help assess the validity of alibis or determine the precise location of a suspect at a given time. From kidnapping cases to drugs conspiracies, specialist telecommunication evidence is playing an increasingly important role in the criminal courts, allowing prosecutors to demonstrate to judge and jury the whereabouts of a suspect at the time of an offence. Some forensic specialists have regarded this as one of the most important investigative advances since the employment of DNA profiling and fingerprint recognition!

'Cell Site Analysis' (CSA) is the term used to describe taking measurements and recordings from the telecommunications network (such as O2 or T-Mobile) to allow signal strength and coverage, it is possible to determine the relative position of a specific mobile telephone handset when a call was made/received or a text message sent/read. It is a little known fact that CSA played a crucial role in the investigation of the murders of Holly Wells and Jessica Chapman in Soham, where cell site evidence was used to challenge an alibi offered by Maxine Carr, suggesting that they had been together outside of Soham at the time when the disappearance of the girls was noticed. As the investigation continued, further cell site evidence was employed to illustrate that Ian Huntley had changed the tyres on his car a day after dumping the children's bodies. Whilst Huntley had been meticulous in removing almost all traces of the girls' presence from his car and property, he was unaware of the electronic footprints being left behind by his mobile telephone.

CSA evidence is rarely challenged, but this can place the defence at considerable disadvantage and without assessing the accuracy of the findings, it will be accepted by the courts as unassailable fact. Furthermore, the findings cannot be examined from a defence perspective, to determine if there is evidence that is exculpatory (i.e. prove innocence), whether the assessment has been undertaken in a truly robust manner, or to allow any form of independent verification.

*Cell Site Analysis can help in reconstructing the movements of a suspect several years after the event. Where has your mobile phone been? What stories could it tell to a forensic analyst?*

Speaking at a recent lecture on the [Isle of Man](#) (IoM), Ross Patel, Expert Witness from [AFENTIS FORENSICS](#), described how CSAs were being regarded as 'the new fingerprints'. 'The evidence provided by telecommunication data can be extremely compelling', he said, and 'increasingly we are seeing whole conspiracy cases – from drugs to murder – being built purely on the basis of this form of evidence. What is important is that in any case where such evidence is being relied upon by the prosecution, the defence instruct a suitably qualified expert to thoroughly assess the crown's finding and identify the challenges and opportunities presented'.

In the majority of cases where contact forensics play a role, such as fingerprints at scene of crime, a defendant may naturally 'put the crown to proof' before deciding on whether to enter a basis of plea with the support of the legal team. In such cases, the defence will naturally instruct an 'expert witness'

to independently examine the evidence and determine whether there is anything that might materially support or undermine the defence case.

However, in many instances technical evidence is regarded as scientifically perfect and as such a defence is crafted around the findings and attacks against the prosecution case are not made in a head-on fashion. The lack of expert support to assess the technical evidence can place the client at considerable disadvantage. As an analogy, take computer based evidence. It is rarely enough to consider whether a particular file is present upon a computer hard drive. What is more important is the detail and story behind the data: when was the file created, was it ever subject to modification, where did it come from, was it sent to a third party, is there peripheral evidence to suggest who was at the keyboard at the time of offence? Finding out the answers to these questions and more helps contextualise the evidence and even in cases of accepted guilt can offer a degree of mitigation that may be taken into account by the courts. Returning to CSAs, a thorough examination of the telecommunication evidence can help in demonstrating that an individual was on the periphery of a conspiracy (and thus could expect leniency from the courts) or lend crucial support to the defendant's version of events.

In a recent murder investigation in the Merseyside region, AFENTIS FORNSICS were instructed to provide a full review of the CSA evidence to assist [EAD Solicitors](#) in appreciating the evidence and assisting their client in his legal defence. The original police findings were quite clear in that they stated that a particular phone call had been handled by a specific mobile telephone cell station and as such placed the defendant in a relatively narrow geographical area as defined by the cell station coverage. Over the course of a fortnight, extensive mappings and field measurements were made across a number of telecommunication stations across the Liverpool area, with signal coverage and relative strengths at different times of day/night plotted graphically onto ordinance survey maps. When the full findings were reviewed in concert with the legal, a number of discrepancies were identified in the prosecution case as well as clear misinterpretations of telecommunication records.

It transpired that it was both technically possible and entirely feasible that the defendant's version of events were correct; in that he was in fact over two kilometres away from the crime scene and at home at the time of the offence!

A wide range of agencies and investigatory agents have authority to request copies of telecommunication data to assist in Cell Site Analyses; ranging from customs & excise through to the police and intelligence services. At this time no formal records are maintained centrally by the Home Office, network providers, or even the Association of Chief Police Officers (ACPO) as to whom is having access to this material and under what circumstances disclosure of the records is being granted. However, based on the cases being heard in courts across the United Kingdom, it is clear that Cell Site Analysis evidence is playing an increasingly important role in both the criminal and civil courts and is a powerful tool to be employed in future prosecutions.

*To request a copy of the proceedings from the Isle of Man (IoM) Law Society expert lecture on telecommunication evidence, or to find out more about Cell Site Analysis (CSA), contact Joanne Davies on 0800 180 4545 or email [jdavies@afentis.com](mailto:jdavies@afentis.com)*