



# Cell Site Analysis



## Overview

**Cell site is one of CCL's stand-out disciplines. Our expert team, the UK's largest, is dedicated to cell site analysis, bringing together skilled operators from forensic, scientific, telecommunications, and law enforcement backgrounds.**

Such diversity makes for a strong unit with a deep pool of complementary knowledge, extensive court room experience and the confidence to actively challenge some of the risky assumptions and poor practice that is still prevalent in this field.

Through our peer-reviewed and published papers and our regular inputs into the Forensic Science Regulator, we are helping to set the standards that will define future accreditation for cell site – and cement its place at the forefront of digital forensics.

### Why choose CCL for Cell Site?

- ✓ We minimise the risks around evidence presentation and defence challenges. We know that presentation of facts is necessary - but expert opinion is critical and we have built our reputation on the primacy of opinion evidence.
- ✓ We work to a consistent gold standard, adhering to the Codes and championing best practice always.
- ✓ We have an extensive service scope with flexible delivery options: total outsourcing, partial outsourcing, surge capacity or ad hoc basis
- ✓ We remain aware of, and sensitive to, the budget constraints that most clients operate under; and we strive to find commercial models and project pricing that works for both parties

## Understanding Cell Site

Today it is quite possible for digital investigators to process call data, produce maps and tables with minimal understanding of that data. The further risk is that this apparent fact evidence will be presented to the jury, with jury members expected to understand what the data is telling them - with little or no explanation.

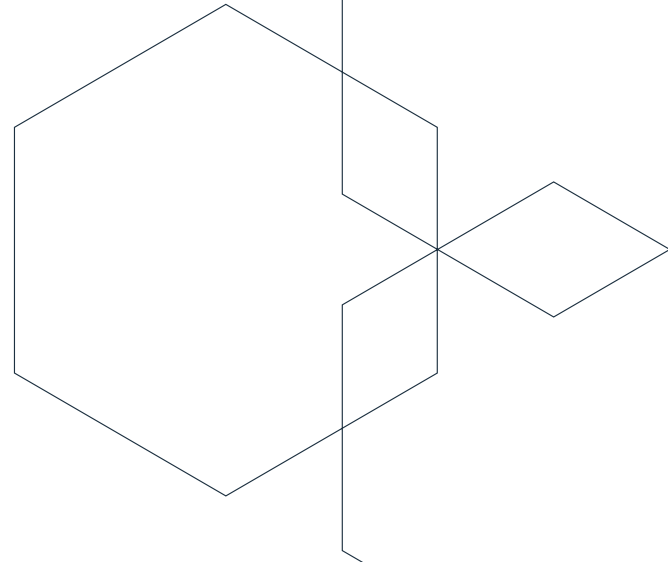
Juries need help in interpreting that data so they can make an informed judgement – in exactly the same way they would be assisted with any highly specialised or technical evidence. Our team members offer the requisite expert opinion, as well as factual presentation, and we do so with acute awareness of what the Criminal Justice System demands.

We know how strong an opinion we can give; what data we have to consider in order to do that; and what the precision of our findings must be when we offer up our guidance.

Our experts are trained in Case Assessment Interpretation (CAI), they understand the implications of inference and how to identify a transposed conditional.

It is vital to appreciate that the location of a target device is not in its Call Detail Records (CDRs). However, the area in which it was operating may be inferred from the detail within the records. Inference is synonymous with opinion, and expressing opinions is the role of the expert witness, as noted above.

The CCL cell site team passionately advocates for the role of experts to ensure that justice is indeed served. Personnel interpreting results need to have been assessed and deemed competent before reporting statements, including the interpretation and opinions of results and findings. There is a huge degree of nuance with cell site analysis and no jury should have maps and tables presented to them as fact, without an expert available to interpret, guide and explain.



# How we work

There is always scope to flex to changing requirements but our typical process flows like this:



## Inference

As well as the technical capabilities set out below, we have a robust and scientifically valid approach to inference which flows through out our work - and distinguishes us from many of our competitors.

Inference is “making sense of all the technical findings in a scientifically and legally legitimate way”. It involves the application of CAI, understanding the implication of a transposed conditional, asking whether the data is of a type to be expected given the scenario etc.



If a hypothesis has been produced through a different process, cell site evidence should only be used to test whether that hypothesis is expected by the evidence; it should never be used to test whether the hypothesis supports the allegations or scenarios being put forward in the case independently of the evidence.

## Our Services

### RF Surveys

We have state-of-the-art equipment, including Software Defined Radio and many SIM-based engineering handsets, ensuring we routinely capture all technologies and networks during a survey. We retain this data for a more complete understanding of the RF environment in an area over time. Most importantly, we understand how to interpret the data in scientifically sound ways and lead the world in our academic understanding of it.

### Scene Preservation Surveys

Using our high-capacity survey equipment we can develop a clear understanding of the RF environment in a given area and are able to indicate mast locations for further analysis. This service is key when an incident is reported, and the LEA has no specific networks or technologies to target. We can provide this data in tabular and map graphical format at very short notice, in order to assist identifying candidates for cell dump requests.

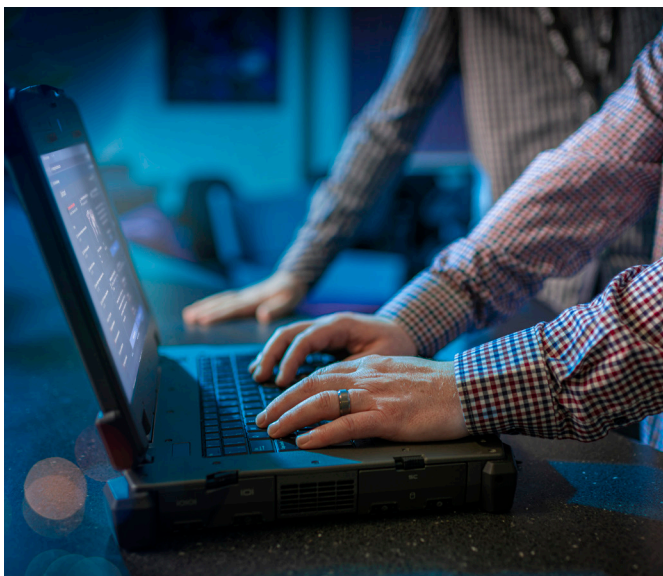


### CDR analysis

When it comes to Call Details Records (CDRs) our team draws on many years of experience within the mobile industry, forensic science, law enforcement and military intelligence to bring a thorough, objective and learned approach to the data generated – and to other evidential elements such as vehicle telematics, ANPR and CCTV, which can all help with attribution of the handset and the handset’s movement.

## Investigative support

We typically support complex investigations through group analysis of multiple handsets and their relationships. We have significant expertise in the analysis of EncroChat phones: their CDRs are GPRS records ie the handset uses the data services of the network, and this requires another layer of knowledge and skill to ensure you are interpreting data correctly and extracting as much potential evidence as possible.



## Expert opinion

Our Experts are trained in the principles of CAI so they understand how to provide scientifically and legally valid evidence that complies with current standards - and the standards being proposed by the Forensic Science Regulator.

They are regularly in the court room providing opinion evidence for the prosecution or challenging presentation or interpretation on behalf of the defence. As a team, we remain committed to elevating cell site to the front ranks of forensic science and that means continued championing and development of the Expert role.



# Looking ahead - changes are on the way

It pays to keep up to date with the latest from the Forensic Science Regulator. In his newsletter ([www.gov.uk/government/publications/statutory-forensic-science-regulator-newsletter-number-1](http://www.gov.uk/government/publications/statutory-forensic-science-regulator-newsletter-number-1)) he has said:

“The draft Code will be published on the Regulator’s website for statutory consultation, which will remain open for 12 weeks. It is anticipated that the Code will be approved by Parliament in the first quarter of 2023, and the Code will become effective on a date specified within the Code.”

# And also:

“For Geo-location analysis (Cell site), compliance is required from the effective date of the Code and, in addition, within 24 months the organisation must demonstrate compliance by having a schedule of accreditation.”

Coming down the track fast is the need for those undertaking cell site activities to be accredited to the FSR’s Code. As an organisation that has had detailed input into the formulation of the new Code, we know better than most that it is not a casual event to achieve accreditation. It’s also non-negotiable: The FSR states that compliance with the Code is an absolute concept; the forensic unit either complies with the requirements set out in the Code or it does not.

If you want to learn more about our services or understand how we can get your organisation FSR Code-ready, then please contact CCL’s Cell Site Team Manager: **Brian Edwards | [brian.edwards@cclsolutionsgroup.com](mailto:brian.edwards@cclsolutionsgroup.com)**



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