



## Training Courses Autumn 2019

## Cell Site Analysis Courses

### Autumn 2019

Our cell site analysis courses aim to provide a basic technical framework for understanding the operation of cellular networks, the capture and meaning of communications billing data, the role of forensic radio surveys and the overall benefit that communications data and cell site analysis can bring to investigations.

#### Communications Data Overview for Investigators

Level 1  
Course Code: FA018  
0.5 or 1 day course

Suitable for: researchers  
investigators, supervisors  
frontline officers, CPS case  
workers, barristers, SIOs

Explains the workings of a mobile network, discusses the meaning and relevance of communications data evidence – Call Detail Records (CDRs) – obtained from network operators and also shows the investigative links that can be established between CDRs, handset download data, Automatic Number Plate Recognition (ANPR) captures and other forms of evidence.

#### Workshop: Cell Site Analysis

Level 1  
Course Code: FA012  
1 day course

Suitable for: new analysts,  
students, investigators,  
SIOs

This workshop is structured around a realistic robbery case and offers the opportunity to gain an understanding of the operation of a mobile network and the investigative benefits of employing cell site analysis in cases, while gaining hands-on experience of cleansing and analysing comms data and other forms of digital evidence.

#### Overview: Cell Site Analysis

Level 2  
Course Code: FA001  
2 day course

Suitable for: intel analysts  
communications data  
analysts, cell site analysts,  
RFPS engineers, SIOs

Provides a deeper understanding of the functions and operation of mobile networks. Explores the role of Radio Frequency Propagation Surveys (RFPS) in cell site analysis. Offers an overview of cell site report writing and the analytical tools employed to make sense of comms data evidence.

#### Advanced: Cell Site Analysis

Level 3  
Course Code: FA002  
3 day course

Suitable for: experienced  
analysts & RFPS engineers

Builds on the Overview course and provides a deeper understanding of mobile network operation, the content and meaning of CDRs, the investigative benefit of RFPS surveys and the types of survey that can be undertaken. Provides underpinning technical knowledge for staff who may need to give evidence in court.

#### Cell Site Overview for Disclosures Teams

Level 2  
Course Code: FA029  
2 day course



Ideal for staff working in the law enforcement liaison or disclosures departments of comms providers, this course provides a background to the network technologies being employed, discusses the interface between network activities and billing data, and enables attendees to understand the value and relevance of the data they are disclosing. It also provides an overview of ways in which the disclosed 'product' is used to aid investigations.

#### Enquiries & bookings

Call: 0800 158 3830

Email: [training@forensicanalytics.co.uk](mailto:training@forensicanalytics.co.uk)

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## Radio Frequency Propagation Surveys (RFPS) Autumn 2019

Forensic Radio Frequency Propagation Surveys (RFPS) add empirical evidence of the coverage provided by cells used by subject phones in a case. Our RF survey courses range from simple overview sessions up to week-long, City & Guilds accredited programmes, backed up by our best-selling book *Forensic Radio Survey Techniques for Cell Site Analysis* (Joseph Hoy, Wiley, 2015).

### RFPS: RF Survey Overview

Level 1  
Course Code: FA019  
1 day course

Suitable for: new RF survey engineers, SIOs, investigators, researchers, comms data analysts

Explains the basic workings of a mobile network, outlines the various types of survey techniques that are employed and provides an insight into how RFPS evidence can strengthen cases that use comms data.

### RFPS: Entry Level Training

Level 2  
Course Code: FA020  
5 day course

Suitable for: new RFPS engineers

A less technical counterpart to FA014 (right), this course provides a basic grounding in the theory of RFPS before concentrating on the practical aspects of conducting surveys. It can be delivered either as preparation for FA014, allowing entrants to RFPS work to gain experience of the techniques without delving too deeply into the theory, or it can be used as a second week to the 'experienced practitioner' course, giving attendees the opportunity to practice survey techniques and report writing for several different types of scenario.

### RFPS: Experienced Practitioner Training

Level 3  
Course Code: FA014  
5 day course

Suitable for: experienced RFPS engineers

Offers follow-on training for experienced RFPS engineers who have gained experience of undertaking surveys and now wish to get a more technical understanding of this topic. In-depth overviews of radio technologies, cellular systems and the operation of radio cells are provided along with detailed examinations of survey techniques and survey devices. Successful completion of the course provides a City & Guilds qualification in RFPS.

City & Guilds Accredited

### RFPS: Follow-on Training

One-to-one mentoring  
Course Code: FA023  
1 day sessions

Suitable for: new and experienced RFPS engineers who want to enhance specific skills

A unique opportunity to spend the day with an experienced RFPS surveyor to discuss survey techniques, equipment issues, report writing and other complex topics in a focused one-to-one manner.

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# Communications Data Analysis & Call Detail Record Processing

## Autumn 2019

Call Detail Records (CDRs) are the lifeblood of comms data analysis. Our training courses help analysts and investigators to understand the meaning behind the CDR records so they can piece together the detail of the events described in them and better understand how this data can support their investigations.

### Communications Data Processing

Level 3  
Course Code: FA015  
3 or 4 day course

Suitable for: new comms data analysts

Now accredited by City & Guilds, this course offers an externally recognised qualification in CDR cleansing, processing and analysis. It provides an in-depth exploration of how mobile networks work and how and where call data is captured. Attendees will explore the meaning and relevance of CDR fields and examine the investigative benefits that an understanding of the data can provide. Current CDR formats are examined in depth and exercises that offer hands-on practice of cleansing/parsing that data are undertaken. An optional extra practice day can be added.

**City & Guilds Accredited**

### Next Generation Comms Data Analysis

Level 3  
Course Code: FA017  
2 day course

Suitable for: new and experienced comms data analysts

This course examines new and upcoming forms of communication, network types and calling techniques: 4G, 5G, VoLTE, SRVCC, Wifi Calling and VoIP among others. It provides an overview of how these new services and technologies work and looks at the CDR data that they provide. The purpose is to prepare CD analysts for the types of data that will become common in the near future and how to extract evidence from them.

### CDR Processing Overview

Level 1  
Course Code: FA022  
1 day course

Suitable for: new comms data analysts, SPoC/CDIU staff, investigators, SIOs

Offers an overview of the basic operation of comms networks and describes the way that basic services (calls, texts, data sessions) are handled. It then looks at the various CDR types that are generated and explains the meaning and relevance of key data fields. A brief overview of current CDR formats is also provided.

### CDR Processing Follow-on Training

One-to-one mentoring  
Course Code: FA025  
1 day sessions

Suitable for: comms data analysts who want to enhance specific skills

Provides an opportunity to spend the day with an experienced Communications Data Analyst to discuss cleansing and parsing techniques, analytical methods, report writing and court presentation skills.

### Core Intelligence Analysis Training

Course Code: FA028  
5 day course

New for  
2019

This introductory programme explores how intelligence-led policing and the National Intelligence Model (NIM) supports reactive and proactive investigations and staff working in an Intelligence Unit. It follows the Intelligence Professionalisation Programme (IPP) standards and focuses on the role of the Intelligence Analyst.

**City & Guilds Accredited**

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## CSAS Training Autumn 2019

Alongside the free introductory training provided for CSAS users we also offer a range of advanced courses, with a 50% discount, that can help users explore more features of CSAS than can be covered in initial sessions and further develop their knowledge.

### CSAS Bootcamp

Level 2  
Course Code: FA004  
1 day course

Suitable for: new CSAS users

Provides an in-depth overview of CSAS Desktop and introduces all modules and features. Users have plenty of opportunities to get hands-on practice with CSAS, using anonymised but real data to gain a thorough understanding of the key operations.

### CSAS Parsing & Data Handling

Level 2  
Course Code: FA006  
1 day course

Suitable for: new and experienced CSAS users

This course provides an opportunity to gain an understanding of how CSAS processes source comms data. The course is country-specific and provides in-depth details of how the most common CDR formats from the local operators are cleansed or parsed, what the parsing rules are and which are optional. This course is designed to provide users with the details they need to be able to answer questions about their use of CSAS.

### CSAS Advanced User Training

Level 3  
Course Code: FA005  
3 day course

Suitable for: experienced CSAS users

Redeveloped for 2019, this training course gives experienced CSAS users the opportunity to gain an understanding of the deeper functionality of the system - from improving their understanding of the parsing/cleansing process, to making better use of CSAS Mapping and Analytics, through to being able to recommend the best configurations for CSAS to their IT support team.

### CSAS Follow-on Training

One-to-one mentoring  
Course Code: FA026  
1 day sessions

Suitable for: CSAS users who want to enhance specific skills

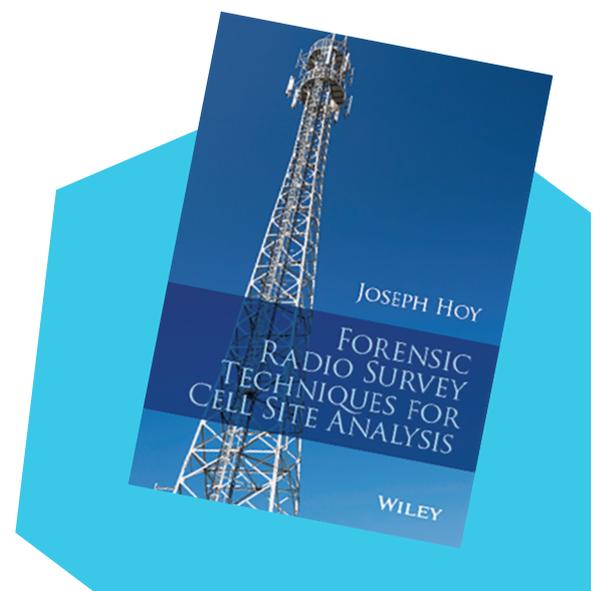
Provides an opportunity to spend a day with an experienced CSAS trainer to discuss parsing, mapping, analytics, report writing and other complex topics in a focused one-to-one manner.

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## Telecoms Training Autumn 2019

Our background is in telecoms engineering and we understand the great benefits that a good grounding in basic network technologies can provide for analysts, RFPS engineers and other forensic disciplines.

### Training Partners

**Wray Castle Ltd** are world leaders in technical telecoms training, offering courses on topics from 2G to 5G and everything in-between. They provide our onward progression path for those who wish to gain more in-depth technical knowledge of telecoms and Internet topics.

**Blue Lights Digital Ltd** are experts in open source intelligence and digital investigation training. Their partnerships with universities and other organisations allow them to offer widely-recognised qualifications and unbeatable domain knowledge.

**Sharopa Training** are specialist trainers in intelligence research, analysis and IBM i2 Analyst's Notebook. Their clients include law enforcement, government agencies and the private sector.

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### Introduction to Telecommunications

Level 3  
Course Code: FA016  
3 day course

Suitable for: all

This course presents a detailed examination of modern communications networks, looking at the history, development and modern implementations of landline, cellular and data networks. It provides a solid understanding of the main concepts of telecoms (circuit and packet switching, transmission and switching) and serves to underpin investigative knowledge with a bedrock of technical understanding.

### Introduction to Mobile Networks

Level 3  
Course Code: FA021  
2 day course

Suitable for: all

This course concentrates on the cellular/mobile network aspects of the Intro to Telecoms training and focuses on technical knowledge that is important to analysts and investigators who work with evidence provided from cellular networks.

### 5G Overview

Level 2  
Course Code: FA030  
1 day course



This course provides an overview of 5G networks in comparison to existing 2/3/4G networks and offers a guide to the likely effects on comms data analysis, cell site analysis and RFPS surveying that the adoption of 5G will bring. We examine the likely forensic impact of 5G in the near and medium terms to allow participants to assess the effect this will have on their ability to investigate and analyse cases that include 5G call data.

## Course List, Booking Information & Pricing

### Course List

Title	Code	Level	Length
Cell Site Analysis Overview	FA001	2	2 days
Advanced Cell Site Analysis	FA002	3	3 days
CSAS Bootcamp	FA004	2	1 day
CSAS Advanced User Training	FA005	3	3 days
CSAS Parsing & Data Handling	FA006	2	1 day
Cell Site Analysis Workshop	FA012	1	1 day
RFPS: Experienced Practitioner Training	FA014	3	5 days
CDR Processing and Interpretation	FA015	2	3 days
Introduction to Telecommunications	FA016	2	3 days
Next Generation Comms Data Analysis	FA017	3	2 days
Communications Data Overview for Investigators	FA018	1	0.5 or 1 day
RFPS: RF Survey Overview	FA019	1	1 day
RFPS: Entry Level Training	FA020	2	5 days
Introduction to Mobile Networks	FA021	2	2 days
CDR Processing Overview	FA022	1	1 day
RFPS: Follow-on Training (One-to-One)	FA023	3	1 day
RFPS: Qualification Sessions	FA024	3	1 day
CDR Processing: One-to-one mentoring sessions	FA025	3	1 day
CSAS: Follow-on Training (One-to-One)	FA026	3	1 day
Core Intelligence Analysis Training	FA028	1	5 days
Cell Site Overview for Disclosures Teams	FA029	2	2 days
5G Overview	FA030	2	1 day

### Booking Information

**UK Locations:** courses are delivered at our offices in Letchworth, Hertfordshire, at Hitchin Priory, Hitchin, Hertfordshire or in Liverpool.

Closed courses may be delivered at a venue provided by the customer.

**Overseas Locations:** courses will generally be delivered at a venue provided by the customer.

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### Pricing

**CSAS courses:** £200+VAT per person per day

**Other open courses:** £400+VAT per person per day

Prices may vary, and discounts are offered if multiple delegates sign up - please contact us for a quote.

**Closed courses:** £2,100+VAT per day.

Discounts are offered for courses delivered at the customer's premises. Expenses may be added for overseas deliveries.

We make electronic (pdf) versions of training material available on each course, but recognise that some people prefer a printed copy. To keep our prices down overall we provide printed manuals as an optional extra charged at cost price - please ask when booking your course.



CSAS  
Desktop



CDAN  
Indexer



CSAS  
Parsing API



Cell Site  
Analysis



Training  
Services

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