

Technical Bulletin: Scope of testing for FSA DIG 200 - Cell site analysis for geolocation

20 July 2026

Scope

This bulletin sets out the UKAS position regarding the accreditation of opinion-based assessments relating to the geolocation of a device within FSA DIG 200 and the rationale for the decision.

Background

Cell site analysis for geolocation falls within the Forensic Science Regulator (FSR) Code of Practice version 2 ('the Code') under Forensic Science Activity (FSA) DIG:200, including the FSA specific requirements. As stated in the Code, compliance for this FSA is demonstrated by having accreditation to ISO/IEC 17025:2017, with the Code and the sub-activities of the FSA, as listed under section 71.3.1, that the organisation undertakes.

UKAS has been carrying out assessments for this FSA where the accredited opinion on device geolocation was based on a Radio Frequency Propagation Survey (RF survey). Historically, UKAS considered the RF survey to be the test underpinning the accredited opinion, and therefore that, without such a survey, there was no test on which accreditation of the geolocation opinion could be based. This position was not consistently accepted across all in the forensic science community with challenge that processing of the call data record (CDR) content is the test without the application of the RF survey 'test'.

Following discussions with stakeholders and the Office of the Forensic Science Regulator (OFSR), UKAS agreed to review its approach.

Review

Given the above, UKAS decided it was appropriate to review its approach in line with the community and the Code. A number of meetings and reviews have been held between representatives from UKAS, the cell site analysis community and the OFSR. In summary those meetings have highlighted the following:

- Without an RF survey being conducted there is no testing or confirmation of the CDR content as these records do not contain sufficient information on their own to support specific location identification. It is the RF survey which verifies the data within the CDR and therefore determines its accuracy and reliability.
- It was identified and agreed that an RF survey is not required or appropriate in every determination of geolocation. Examples of this may be dependent on the age of the case or where direction of travel or co-location is required.

(Note: Currently UKAS only offers accreditation of opinion on the possible geolocation of a device and not on activity level propositions).

- There is a risk in opinion being based purely on CDR content without the consideration of an RF survey or the knowledge of when an RF survey is necessary or beneficial. It was recognised that such decisions would be part of the strategy setting, and if a survey was not undertaken this would be based on the experts' experience and competence with those decisions recorded and justified along with any limitations in the approach.
- It was recognised that there are risks associated with the reliance purely on CDR content as network providers complete this data using processes which are not quality controlled in the manner required by forensic investigations. It was noted that CDR content risks are often mitigated by the use of RF survey data.

It was also noted that the Code considers a number of sub-activities to each be part of the overarching activity concerning the inference of the possible geolocation of a device of interest as detailed at Clause 71.3.1:

- *"...Cell site analysis for geolocation includes but is not limited to the following:*
 - *RF propagation survey of an area or location guided by case scenario and/or call data/detail records (CDR) as part of determining geolocation of a digital device;*
 - *Processing and normalisation of CDR's or other network provider data for the purposes of cell site analysis for geolocation and related findings;*
 - *Creating/adopting maps of cell sites and/or cell site coverage for the purpose of reporting to court; and/or*
 - *Assessment and evaluation of CDR's or other network provider data against survey data."*

In addition, the Code v2 within the specific requirements supports the need for knowledge and competence in surveying in order to set appropriate strategies as defined at clause 99.4.1:

- *"... strategy should focus on ensuring a request is appropriate, material supports the request and there are clear propositions to be addressed, and that an outline plan/strategy exists of how the practitioner plans to evaluate the proposition. It could include an independent review of the proposed survey strategy or justification for not surveying."*

Method of accreditation

Given the above information and after consultation with the community and the OFSR, UKAS has determined that for an organisation to be accredited for opinions related to the geolocation of a device the accreditation assessment must cover RF survey capability, CDR content normalisation and processing and mapping.

In addition, training and competency assessments must demonstrate that those involved in strategy setting have sufficient knowledge to understand the full process including the knowledge and understanding of RF surveying to enable them to assess when it is justified and critical to carry out a survey or not.

It may not always be necessary to complete all of the sub-activities as defined in the Code clause 71.3.1 when providing an opinion in relation to the geolocation of a device, however if any of them are not used this must be fully, clearly and appropriately justified.

Wider application of accreditation

UKAS is aware that considerations within the community exist with respect to the application of accreditation to other areas of cell site analysis. This typically extends to the application of accreditation to activity level reporting. Currently UKAS does not accredit any area of forensic science for activity level reporting due to the complexities and no clear pathway for this to be undertaken. However, UKAS is looking to work with the community and review this area to address how accreditation could support assurance in this critical area of forensic reporting.

If you have any queries in relation to the above, please contact your Assessment Manager or Philip Avenell (Accreditation Specialist Forensics) at philip.avenell@ukas.com.