



# Explanation of polling information

## Context Explanation

Mobile network operators record large amounts of data related to polling activities. However, the data recording practices vary from operator to operator due to the lack of a standardized method for recording polling data. Unlike network interactions governed by international standards, polling data collection lacks uniformity. Therefore, obtaining as much information as possible is crucial to create a comprehensive dataset for analysis.

Information	Why we request the information
<b>1. Information related to (all) complainant(s), (all) defendant(s) and any associated party(s).</b>	It is important that as much data is collected for two reasons <ul style="list-style-type: none"><li>• Since we don't know how cell phone data can help in a case, it is better to have more data than less.</li><li>• Get all the data before it is lost (detailed location data is only kept for six months).</li></ul>
<b>1.1. Record of polling activities:</b> Voice, text, data, location update, attach & detach, and cell reselection (record of these activities on all technologies used by the phone)	Currently we are provided with records of voice, text and sometimes data polling activities. These activities, tell part of the story. However, more information is available and it is better to get all of that data for greater visibility.
<b>1.2. Time and duration</b> of the polling activity	Time tells when the activity happened. In conjunction with cell site information, allows the phone to be placed in an area at a certain time.



1.3. <b>Cell IDs</b> of all cell sites that served the polling activity	Cell ID approximately defines the area where the phone was.
1.4. <b>Cell site details:</b> Coordinates, azimuth, technology and frequency of all the cell IDs	Coordinates specifies the location of the cell site. Azimuth defines the direction of the cell site. Frequency defines the range. These three factors can approximately define the coverage area of the Cell ID. Technology is also factor in defining the range.
1.5. <b>Timing advance</b> or propagation delay associated with the polling activity.	While Timing Advance cannot define where the phone was, it is helpful to test whether the Timing Advance (or propagation delay) places the phone in a location (useful to dispute).
1.6. <b>Amount</b> of data per data session	Helpful to test whether the amount of data correspond to the activity e.g. video download will use large amounts of data.
<b>2. Request the mobile operator to provide answers to the following questions</b>	Currently any explanation of how the polling data is recorded by the mobile operators have been provided by the Police. Generally, limited information is provided and does not provide the full picture.
2.1. Timing accuracy of the data sessions. If the timing is not accurate, what is the typical range of error.	Some time stamps on the data sessions are deemed not accurate. We want to understand why.
2.2. Availability of second cell site that served the polling activity	A polling activity could be served by one or more cell sites. Some operators record only one cell site. Other record the first and the last cell site. It is useful to have this information.



2.3. Explanation of how the data sessions are recorded.

2.3.1. How is the time stamp of the of the data session is calculated.

2.3.2. If duration of a data session is recorded how is the duration calculated.

Have been provided various explanations by Police on how the data sessions are recorded. We need to get this from the mobile operator. A number of times the explanations have materially affected the evidence. Therefore, it is important that we get this information from the source.