

GNSS/GPS Interference

Reported in MENA Region 2022

Global Aviation Data Management
March 6, 2023

Analysis Scope – Event Definition

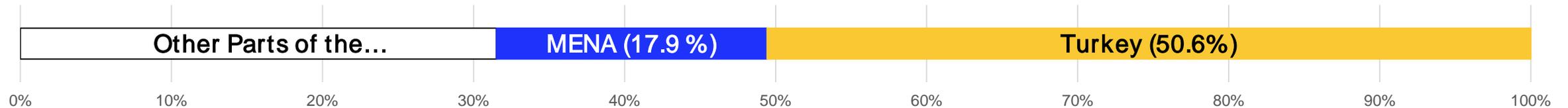
The analysis utilized three datasets: Incident Data Exchange (IDX), Flight Data Exchange (FDX), and NOTAM information held by the IATA. The analysis covers the time period of January 2022 to December 2022.

Incident Data Exchange (IDX)

The analysis revealed 524 GNSS/GPS jamming or suspected interference reports from 12 operators in the MENA region and adjacent states gathered through the Incident Data Exchange (IDX) from January 2022 to December 2022. A total of 462 reports of GNSS interference were excluded from the analysis because the exact location of the incident could not be determined for flights that departed from or arrived in the MENA region.

Flight Data Exchange (FDX)

The analysis also utilized data from the Flight Data Exchange (FDX) to extract a total of 162,654 'GPS signal loss' events from 54 operators in the MENA region and adjacent states from January 2022 to December 2022. This is 68.5 % of all GPS Signal Loss Events in FDX database in 2022. The Total Event Count around the world was 237,489.

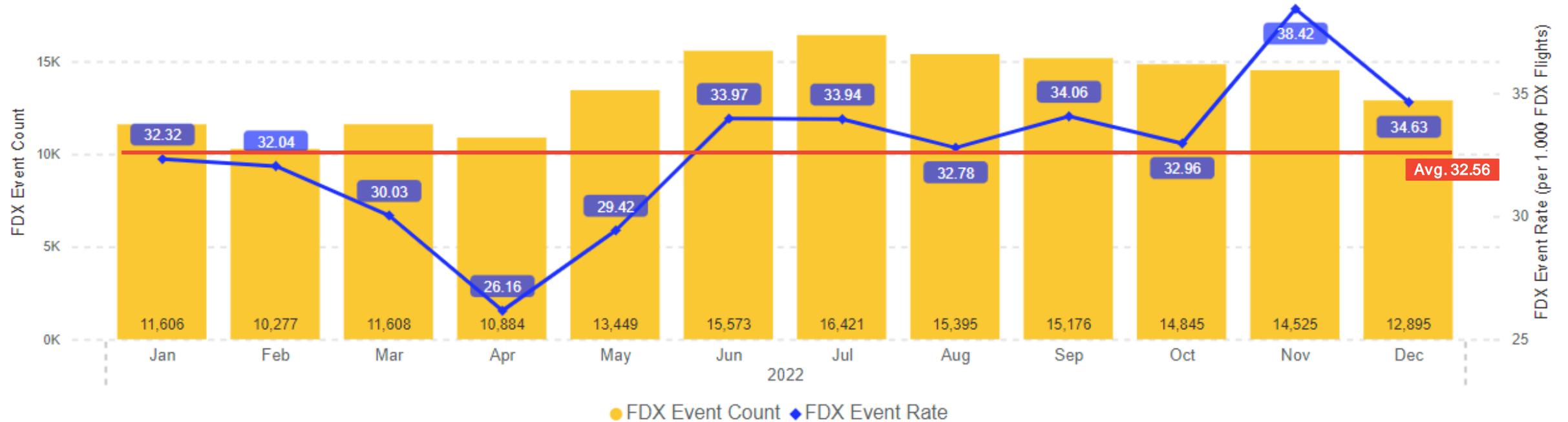


NOTAM (FAA SWIFT Portal)

In addition to the above datasets, 66 GNSS interference NOTAMs were extracted from the NOTAM archive issued over MENA States from January 2022 to December 2022, sourced from the FAA SWIFT Portal.

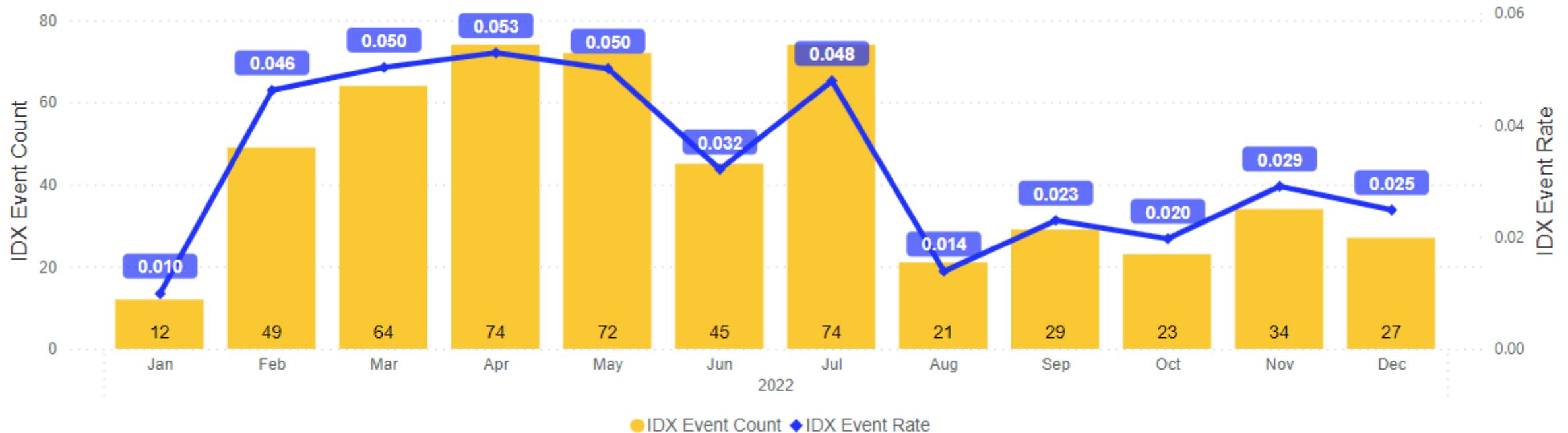
GNSS/GPS Interference Trend

Monthly rate trends for the FDX 'GPS Signal Loss' event and Event Count



GNSS/GPS Interference Trend

Monthly rate trends for the IDX GNSS Interference event and Event Count

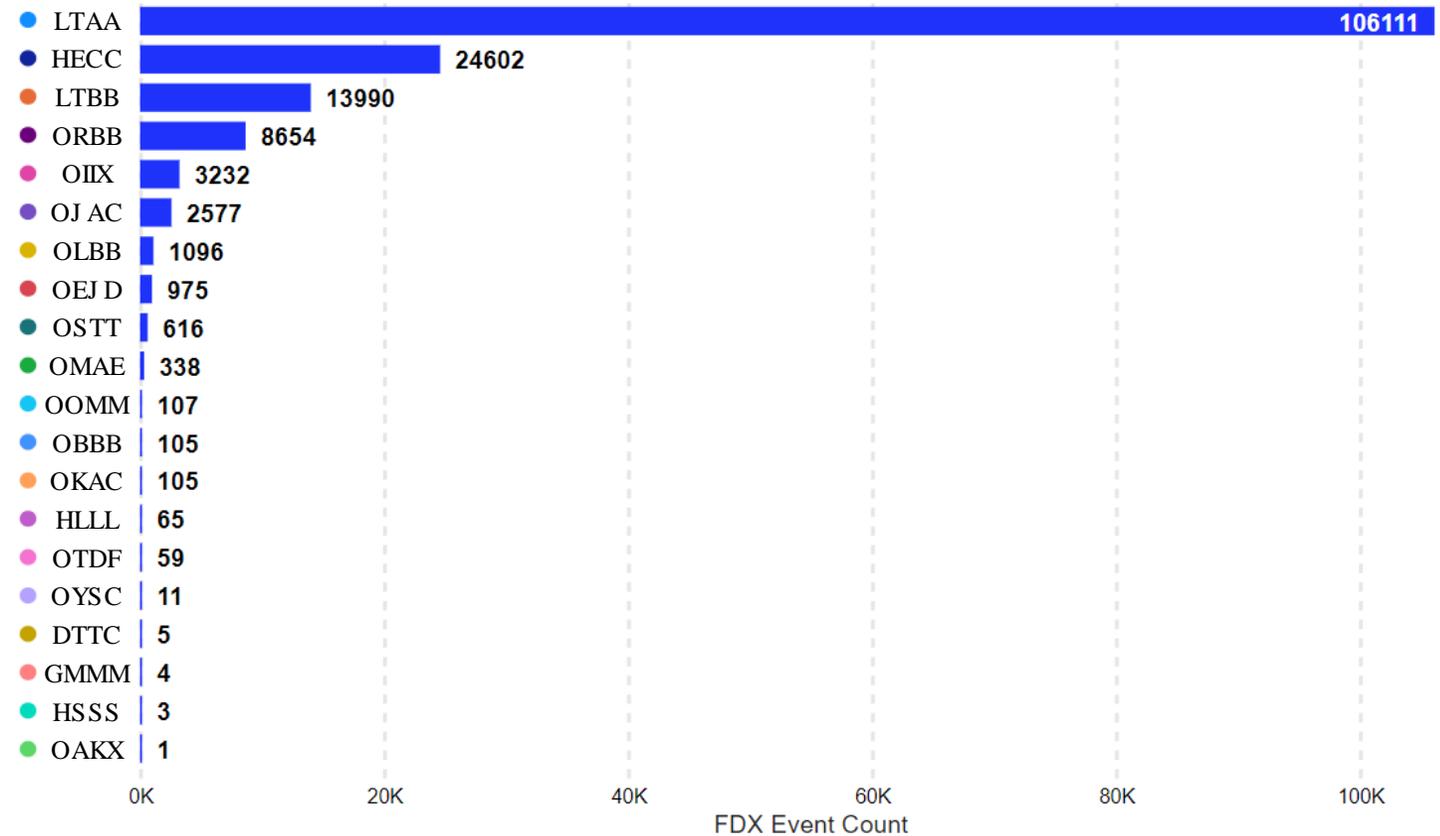
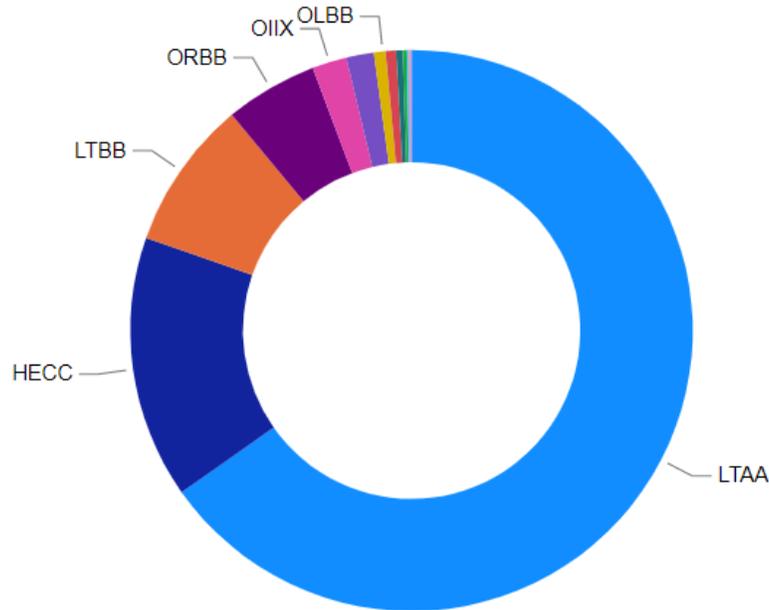


- The number of reported GPS Signal Loss events in the IDX data is significantly lower than in the FDX data.
- This may be due to the fact that these events are not mandatory to report, and they have become so common that they are no longer considered abnormal or worthy of reporting.
- Additionally, many reports that mentioned GNSS interference were not included in the analysis because the exact incident location could not be determined with the information provided in the report. As a result, the actual number of GPS Signal Loss events may be even higher than reported in the data.

Distribution of GPS Signal Loss by FIR

FDX GPS Signal Loss Event Count Per FIR

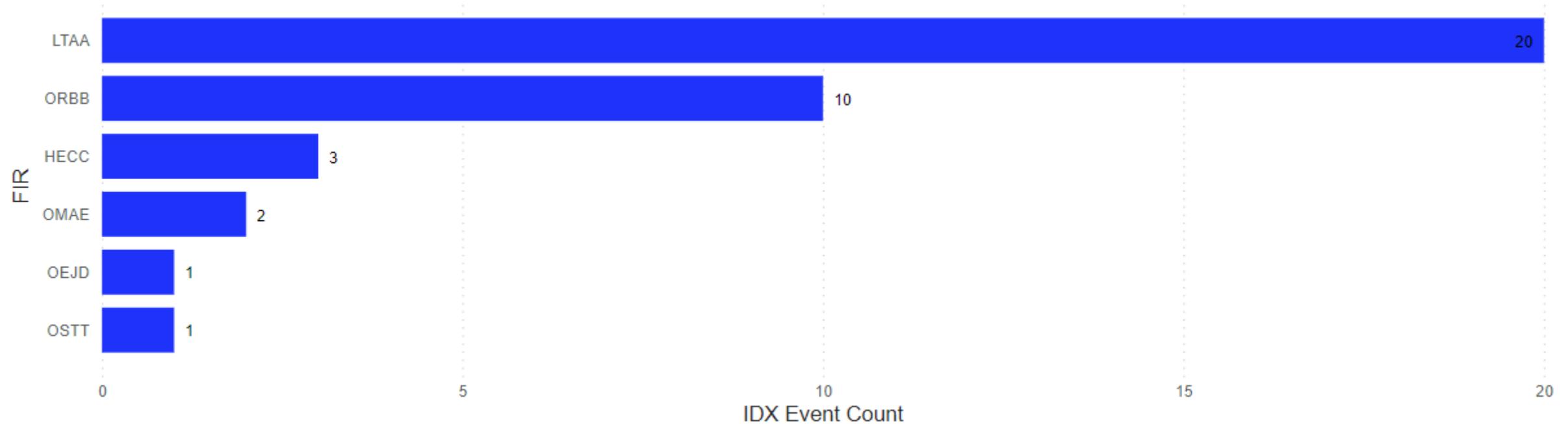
FDX GPS Signal Loss Event Count By FIR



Distribution of GNSS Interference by FIR



IDX Event Count of GNSS Interference



- Many reports were excluded from the count due to the absence of FIR information in the reports, which is not mandatory.
- As a result, the reported numbers are significantly lower.

Thank you.

Global Aviation Data Management
IATA

