

It is our understanding that operational data stored in [REDACTED] and initially collected by Europol to provide support in criminal investigations, are going to be processed for the development/training and testing of the machine learning models described in your email of 21 October 2020. Afterwards, these models are going to be used in order to extract entities to be stored in the same and/or in other APs.

- Could you **confirm that our understanding is correct?**

The models and their use will be part of the analysis process of this data.

They will be designed to facilitate the detection within the dataset submitted to [REDACTED] in the framework of the joint investigation team, of specific types of entities (for instance names, phone numbers, license plates, IBAN numbers, container numbers, weapons ...). Once detected, the usual work on these entities (assessment of contextual information linked to these entities, cross-check, analysis) will be conducted by Europol staff in order to assess their relevance from an investigative point of view and also the relevance of storing them as separate entities/objects in the Analysis project.

The models will also facilitate the pre-selection, for review and assessment, of communications or users of these illegal communications likely to develop activities of specific interest due to their importance and falling within Europol's mandate (for instance large scale drug trafficking, murders ...).

The model is therefore made to help the selection of messages that could be of higher relevance and assist in prioritising the contents to be assessed and identifying the users.

They are tools to locate potentially relevant information within the dataset. Their use will only be a part of a process which involves systematic human intervention, assessment and validation by Europol staff on the relevance of the output.

- Furthermore, could you

- (A) Define which set of operational data is going to be used for the abovementioned purposes (development/training and testing of machine learning models) and the criteria that will be used to select them;

The [REDACTED] dataset consists mainly of a large number of messages, geolocation positions and media attachments (images). Access to this dataset is required, as it will be used to train or fine-tune several machine-learning models.

The whole dataset, or a randomly selected sample, will be used to train an unsupervised language model. A subset of the messages will be manually selected and annotated by Europol staff [REDACTED]

[REDACTED] A subset of the images will be manually selected and annotated by Europol staff [REDACTED].

- (B) Inform us on whether, and if so which, existing algorithms and programs will be incorporated into this new project.

The following AI-based algorithms will be incorporated:

- A publicly available pre-trained transformer-based language model will be further fine-tuned with the whole corpus or a randomly selected sample,

to generate a language model of the corpus, which will be used as basis for subsequent techniques.

- The language model will be fine-tuned for [REDACTED] on a manually selected sample, annotated for different named entity types of interest for this project. Those entity types correspond with regular entity types stored in the database of analysis project [REDACTED]
[REDACTED]
[REDACTED]
 - The language model will be fine-tuned for [REDACTED] on a manually selected sample, annotated for different text categories of interest for this project, such as Threat to life or Police corruption.
 - A publicly available pre-trained Image Classification model will be further fine-tuned on a manually selected sample, annotated for different image categories of interest for this project, such as money stashes, drugs or weapons.
 - A publicly available pre-trained Facial Detection model will be used to detect faces in images.
 - A publicly available pre-trained Facial Recognition model will be used to facilitate manual 1:N facial searches.
 - A publicly available pre-trained Robust Text Detection model will be used to detect text in images.
 - Several standard machine-learning techniques will be applied to the resulting datasets, such as clustering, dimensionality reduction, etc., with the purpose of presenting data to the accredited Europol staff in a meaningful way.
- In the context of the inquiry regarding the use of production data by Europol for “data science” purposes (Case 2019-0264), Europol has implicitly argued in its letter of 6 August 2019 that the appropriate legal basis for this kind of processing operations is Article 28(1) (b)ER. Could you **please explain/clarify why you consider Article 18(2)(c) ER** (operational analysis) **as the appropriate legal basis for the use of operational data, initially collected for purposes of operational analysis, for purposes of development/training and testing of the machine learning models** described in your email of 21 October 2020? What is the **distinctive difference** between the projects described in your letter of 6 August 2019 and of the current project?

When a joint investigation team is set up, Europol could support it in a number of ways, such as by:

- showing the big picture: identifying links between related cases and investigations;
- liaising directly with JIT members;
- providing members with information that Europol maintains;
- offering analytical and logistical support, and technical and forensic expertise;
- supporting the secure exchange of information

This type of support is also the one in the present case. By developing the machine learning models to be used with data from and within the ambit of AP [REDACTED] we are supporting the data exploitation and analysis within our operational support. Europol is not using the operational data collected in the present case for anything else than operational analysis.

According to Article 4(1)(c)(ii) Europol Regulation (ER), Europol should coordinate, organise and implement investigative and operational actions to support and strengthen actions by the competent authorities of the Member States, that are carried out in the context of joint investigation team (JIT). Furthermore, Article 4(1)(h) ER reads that Europol shall “support Member States’ cross-border information exchange activities, operations and investigations, as well as joint investigation teams, including by providing operational, technical and financial support.”

By referring to the two above mentioned provisions, Europol considers that the technical support provided in the present case falls within the operational support provided in the context of the JIT. This operational support is based on the JIT agreement signed among the participants, which is established for a limited duration and for a specific purpose. Although the JIT agreement is ‘technology-neutral’ – it does not specify the exact technical means to be used when processing data, the parties nevertheless agreed on how the information will be collected, exchanged and processed. Within the limits of its mandate, it is up to Europol to define the technical means of providing the requested operational support. In accordance with the JIT agreement as well as the applicable provisions of the ER, Europol shall assist in all activities and exchanges of information with all members of the joint investigation team.

Additionally, according to Article 5(3) ER, “Europol staff participating in a joint investigation team may [...] provide all members of the team with necessary information processed by Europol for the purposes set out in Article 18(2).” Pursuant to Article 5(4) ER, “information obtained by Europol staff while part of the joint investigation team may, with the consent and under the responsibility of the Member State which provided the information, be processed by Europol for the purposes set out in Article 18(2), under the conditions laid down in the Regulation.”

Based on the above, we consider that the technical means used to provide operational support in the current case fall under Article 18(2)(c) ER. Moreover, they are regulated by the JIT agreement consensually signed among the parties. The aim of using the machine learning models in the context of the current investigation is to facilitate the data analysis as well as the results of the work of Europol’s operational unit. In this regard, we would like to also herewith confirm that decisions in the current case are not based solely on automated processing. More specifically, appropriate data protection safeguards such as for instance human oversight and transparency are taken on board when analysing the available data.

- In order to facilitate the comprehensive analysis of your questions, could you please further:
 - (A) Describe the methods to be used for the development of the machine learning models;

As explained in the answer to the previous question, we are going to use multiple models, some of them publicly available and pre-trained on non-operational data, some others trained or fine-tuned on the corpus of this specific case or a subset of the corpus.

Models related to Natural Language Processing tasks, such as [REDACTED] will be based on a contextual language model. Models related to Computer Vision tasks, such as [REDACTED], will be based on convolutional neural networks. In addition, as explained in the answer to the previous question, models that can be trained

making use of unsupervised techniques will be trained on the whole corpus or a randomly selected sample, while models that require supervised techniques will be trained on annotations made on manually selected samples.

- (B) Describe the methodological and ethical standards to be applied for the development of these models;

The development of the models will be done in close cooperation with O Directorate and DPF to ensure that they only contain features of interest for the detection and analysis of criminal activities within Europol's mandate and related individuals and entities. The models will not be designed, or used, to retrieve willingly special categories of data such as data relating to health, sexual preferences, political opinions, religion, ethnical origin, etc.

The models are considered as tools to locate potentially relevant information within the dataset. But their use will only be a part of a process which involves systematic human intervention, assessment and validation by Europol staff on the relevance of the output.

- (C) Inform us on whether the conclusion and the reasoning of the research activities are going to be transparent and open to criticism and to which extent and audience;

All the techniques used will be documented and the results produced will be included in a final report.

As for the audience, the criteria used to develop the models should be considered as restricted (not public) as some of them may give indications to criminals on how to prevent law enforcement and judicial measures against them in the future.

- Could you please **further explain** to what extent the **produced results** (through the machine learning models) **will contain special categories of personal data**, whose processing will be in line with Europol Regulation.

The results will not as such contain special categories of personal data.

However, as indicated above, the models will be applied to assist in retrieving quickly specific types of entities (names, phone numbers, ...) or communications and related individuals likely to develop activities of specific interest due to their importance and falling within Europol's mandate (for instance large scale drug trafficking, murders ...). When selected by the model, the entities and contents will be reviewed by the accredited Europol staff. As the data set contains communications, it is possible that some of these communications contain information relating for instance to the health of the users of the illegal communication service, or pictures of individuals revealing their possible ethnic origin. As for the users identified, some of them might appear to be minors.

No further processing or reporting of this type of information contained in the communications will be done, unless strictly necessary and relevant in the framework of the investigations supported, and in strict compliance with the Europol regulation and other applicable legal instruments. The algorithms will not be designed, nor used, to retrieve willingly this type of information.

- Could you explain **why you consider that the development of machine learning models with the use of operational data does not qualify** as “new technologies, mechanisms or procedures, presenting specific risks for the fundamental rights and freedoms, and in particular the protection of personal data, of data subjects” that would be subject to a prior consultation under Article 39 ER?

In particular, in the light of the EDPS opinion issued on Case 2019-0850 where the EDPS reiterated its concerns with regard to the development of machine learning tools, which may involve the use of production data for training purposes and asked Europol to ensure that the development of the envisaged in that case machine learning process is dependent on a specific DPIA to act as a roadmap for Europol to identify and control the risks to rights and freedoms of data subjects. **Is there any substantial difference between these two projects?** Wouldn't the development of these machine learning models result in the use of new technologies (machine learning models) and **substantially change the way of processing large amounts of data?**

Currently, the information is in ██████, through which Europol provides its operational support to JIT countries and other Member States. Therefore, the Agency's position is that the use of the algorithm is for operational and not scientific purposes. Furthermore, according to recital 50 of the Europol Regulation, the prior consultation mechanism “should not apply to specific individual operational activities, such as operational analysis projects, but to the use of new IT systems for the processing of personal data and any substantial changes thereto”.

Europol considers the present case of operational support falls within the realm of “specific individual operational activity” and therefore under recital 50 of the Europol Regulation.

Europol deems that the current case of provision of operational support is different than the ██████ ██████ as referred to the EDPS under Case 2019-0850.

The idea behind the creation of the ██████ is to allow Member States to access data that they have contributed to Europol and which is stored at Europol. This access take place in accordance with Article 20(1) and (2) ER. Member States would select reports from that data assessed by them as appropriate. They would also be notified about the possibility to receive additional information on reported entities from AP Twins, based on an automated hit/no hit check against ██████ data in accordance with Article 20(2) ER.

The current case for operational support differs from the ██████ case as it does not involve the creation of a tool for Member States access and use. In the ██████ case, we are talking about the development of tools as part of a system exposed to MS. In contrast, in the current operational support case, the data is only exposed to Europol for analysis on the basis of consent under the JIT agreement.

Moreover, yet another difference is the fact that the machine learning tool described in the ██████ case is provided from Europol to MS and is specifically trained for each MS. The ██████ machine learning tool is further developed and refined through the report selection of the investigators on an going basis. Therefore, the training of the machine learning tools in the ██████ case is under the responsibility of the MS involved – it depends on how the crime area is addressed in the respective MS. Thus, since the ██████ system is hosted at Europol but trained by the Member States, the

associated risks of this machine learning would rest separately with Europol and the Member States. It would, for instance, be the Member States' responsibility to ensure that the operators receive the proper training and that they ensure mechanisms are in place for correcting any bias that may occur. The provision and maintenance of the infrastructure, software and algorithms allowing for the implementation of machine learning would rest with Europol. Regarding that, Europol acts as a service provider, improving its effectiveness in providing accurate crime analyses to the competent authorities of the Member States by means of using new technologies.

In contrast to the █████ case as described above, the tools foreseen to be developed in the present case are only meant to facilitate, within the set of data, the detection of entities and contents which might require a faster review or processing by the Europol staff. The criteria applied to detect these contents and entities of possible interest are strictly in line with Europol's priorities and legal mandate. Once detected, the entities and contents are reviewed by Europol staff to assess their relevance. The models would be merely developed to facilitate the detection of relevant entities and contents within the data set, or to speed up the detection of entities or contents of specific interest. It will therefore not substantially change the way of processing large amounts of data but merely bring support to the accredited Europol staff in detecting entities (which is not a new process) and prioritising their work before the actual assessment and analysis of the data is conducted by them.

To sum up, in the █████ case, we have a "communication tool" between MS and Europol – a tool for facilitating information exchange under Article 18(2)(d) ER. In this case, the agency acts as a service provider and/or a platform for law enforcement services.

On the contrary, in the current case for operational support, the activities of the agency fall within the ambit of its core business, namely the provision of operational analysis.