

The subscribers XXXXXXXXXXXXXXXX, YYYYYYYYYYYYYY and  
ZZZZZZZZZZZZ, GGGGGGGGGGGG in Computing, by request of  
SSSSSSSSSSSSSS in Ordinary Trial No. A / 2025 in **the Civil and Criminal  
Chamber of the Superior Court of the Syldava Community**, according to their  
knowledge and understanding, issues the following

## Opinion

### Query

We are presented with two discs with computer files, which are listed below. A study of their metadata is requested to study the variations between them, and if of the variations found, if they exist, they must invariably be intentionally manipulated. Regarding the present study, we define metadata as the data about the data itself. In this case that concerns us, more specifically, we talk about data on a file that houses data. In Annex I, this term is seen in more detail.

## Background and Limitations

1) For the study of two compact discs, placed at our disposal by the Judicial Secretary, with the following contents:

a) CD disk nominated "E-002". It contains a large amount of computer files. The detailed study of them can be seen in Annex III

b) CD disk nominated "E-009". It contains a large amount of computer files. The detailed study of them can be seen in Annex IV

2) It is not possible to have access, given the elapsed time, to the computers that originally generated the files. Even if we could study them, if they were not isolated, the habitual use of them would make any study useless due to the loss of the original conditions.

3) We do not know what was the life of the files (if they were born from a common template, if their development could be collaborative among several people, or even if

there was a corrective cycle between people from various institutions, which can only be guessed. As an example, we can conclude the origin of a common template of many of them, by sharing metadata as the internal title of the document, but can not be certified without a shadow of a doubt this fact).

4) Likewise, we do not know how they were recorded to their final support in the Court, where the copies studied were obtained

## **Allegations and Considerations**

Through the use of different tools (FOCA, Metaextractor, Metaviewer, Metadata analyzer and different office suites) we study the content of the metadata of the files placed at our disposal. The analyzed metadata structure can be seen in Annex V.

There are metadata that in many cases lack content and others that are irrelevant. Specifically, the dates of creation and access, stored by the file system (File System), since the original support of the files is not available (the original hard disks where those files were created) for the study, are no longer interesting . It should be noted at this time that the date of creation of a file is stored not only inside it, but also in an area of the computer disk where it resides, in its filesystem (File System). As we do not have those hard drives (and although we had them available today, the time elapsed suggests that this evidence would be contaminated) we can not establish comparisons between both dates, as we pointed out in section 2 of the Background and Limitations. Simulations of use have been made with different computers and office products (Microsoft Office, LibreOffice, OpenOffice) with a copy of the files, to verify their malleability in their daily life (to check that they respond adequately to changes).

## **Study of metadata**

In the first place, once the study of the two sets of files (E-002 and E-009) available to us, indicated in sections 1.b and 1.c of the Antecedents and limitations, is made (annexes III and IV) we proceed to a comparison of them.

There are a series of files without correspondence, which appear in 1.c) but not in 1.b).

They are those that are related below:

#### UNIQUE FILES IN E-009, WITHOUT EQUIVALENCE IN E-002

Path: F: \Ficheros informaticos \ ORG0001

File: 01\_Presentation.doc

File: 02\_Minerales.doc

File: Justificantes gastos.doc

File: Justificantes gastos.xls

File: External audit.doc

File: DAFO.doc

File: REVISIÓN.XLS (this file is resistant to an analysis with the FOCA tool, and also to its manual study, being reviewed with the metadata analyzer tool)

Path: F: \ Ficheros informaticos \ ORG0002

File: Presentation Asia.doc

File: Presentation Oceania.doc

File: Justificantes gastos.doc

File: Justificantes gastos.xls

Path: F: \ ORG0001

File: doc.pdf (without metadata of interest)

Path: F: \ ORG0002

File: doc1.pdf

File: doc2.pdf

File: doc3.pdf (without interest metadata)

Finally, its metadata is not included in Annex IV, because it does not derive any criminal imputation, as indicated by the legal counsel. The rest of the files, as can be seen in the study, coincide fully in their metadata. They are the following:

E-009

Path: F: \ Ficheros informaticos \ ORG0001 \ Projects

Matches with "E-002". Comparison with

Path: F: \ Projects

Files: ANALISIS PROYECTO G0 \*\*. Doc (being \*\* replaceable by figures 01 to 13, and 15)

Path: F: \ Ficheros informaticos \ ORG0001 \ Valoraciones

Matches with "E-002".

Path: F: \ File: Ranking of E-002 2012.xls

Files: CUANTIFICACION PROYECTO G0 \*\*. Xls (being \*\* replaceable by figures 01 to 13, and 15)

In general, they appear to be multiedited files: where more than one person has intervened in their construction. This, within the routine of office automation, is typical of organizations of all sizes: documents tend to be tremendously similar and productivity rises based on a document that, at the time, someone created from scratch, and then simply change its content to take advantage of formats and / or formulas. This can be indirectly confirmed by seeing that the Title metadata in the word files named "ANALISIS PROYECTO G0 ??. DOC" is "TRABAJO 2517" and share the author, although the Last Saved By metadata varies, which is the one that actually used that metadata. instantiation of the file.

There remains the study of the metadata that appear outlined in section 1.a) The metadata par excellence of a computer file is its name, which DOES NOT coincide with any of those that appear in the two discs with data of the study. Thus, while in E-002 reference is made to "FICHA\_ORG0002", in the studied file sets we have, as a supposed equivalent, a ANALISIS PROYECTO ORG0002. It is probably not the same file: either it is not the same file or it is the same renamed file. Other changes observed is in the change of the date of modification and creation (15 days less) and in its last author: in the screenshot of E-002 appears jmiquelarena (apparently the author of the e-mail that attaches it) and not Samuel Ros , being the creator of the file in both cases "aalfaro".

You can see a list of folders that, by numbering, because not by name, can be related to documents 02, 03, 05, 06, 08, 10, 13 and the Excel document "Orden de los Proyectos 2012.xls", which in turn seems to be the file "Ranking of E-002 2012.xls". As these are different elements, the modification dates vary. In some the variation is for a few minutes after or previous to the computer files studied, and in two cases, previous in time, although in the case of the folder P\_ORG0002\_2012 we can not know what dates the documents are included in and, in the case of the Excel document, as we have pointed out, it is really a different file (different name, different metadata).

## Considerations and Conclusions

- The metadata referred to are automatically updated, and its intentional manipulation is not possible without computer tools and sufficient knowledge, so the reason that they vary from one to another, especially when the content is identical, does not seem likely to be due to human intentionality, but to some computer or human accident, without being able to determine accurately without a thorough study of the life of the files.

- The change of author that makes the last modification, usually indicates that it was saved for the last time from a computer different from the one used to create it.

- Can specific authors be deduced from the author / last user metadata that modified the document? Not in an absolute way. When a user is registered, the name that is indicated to the application is free, being able to be real, an alias, or, directly, false. Even so, we can see how there are tendencies within some organizations to use a common pattern. In the example, we see how a pattern of the Last Name style appears (eg Samuel Ros) and another Initial Type type pattern (eg aalfaro). They are not the only possibilities: in some organization they use for example rivers of the Community (Turia, Clariano, Magro).

- **Considerations about the set of files**

- o All the files related to Projects (from 1 to 13, and 15), both .doc extension (Microsoft Word) and .xls (Microsoft Excel) share a series of common elements, such as coding (Latin I) (ISO standard that defines the Latin alphabet) and the application (Microsoft Office). It may seem that this is the only possible application given the type of the files, but it is not, since there are alternative applications with a creative commons license (Libreoffice or Openoffice, for example).

- o For all Word files (extension .doc) we can see that they share the title (WORK 2517) and creator (aalfaro) which leads us to think of a common origin (the same file that was modified as many times as necessary to generate the complete set of files). This seems

to be supported by the coincidence in documents 05, 06, 07, 09, 10 and 13 at the time of creation (10:55:00 of July 9, 2012).

o In the files with the .doc extension only four possible authors appear: always aalfaro as a creator and three possible last editors: Samuel Ros (7 occasions), jmiquelarena (6 occasions) and agustin (1 occasion). In all the documents where jmiquelarena intervenes, the operating system is Windows 7, while in the rest of the documents, it is Windows XP. The template used in the document is "Normal", but it should be noted that the reference that the document saves is "Normal.dot" in the files with Samuel Ros as the last editor. In the other cases, it appears as "Normal". Mostly appears as "Company DELL", although not in files 03, 04 and 08.

o About the Excel files (.xls) related to Projects, all were created by jmiquelarena, and except the first and the twelfth where he was also the last editor, appear as the last editors rgarcia (4 occasions), Samuel Ros (4 occasions), mmateo (2 occasions), aalfaro (1 occasion) and ghost (1 occasion). In all cases the company (Blue) and Operating System (Windows XP) coincide. Numerous referenced printers appear, the most repeated (9 times) being a network printer (DELL Color Ink).

o As regards the dates, we note that, in the .doc files, only two have a printing date (01 and 03), coinciding at the time of creation files 05, 06, 07, 09, 10 and 13, and at the time of modification files 11 and 12 (this is not usual, usually due to the closure of the files as a side effect of the closure of the application itself). The date of last modification, except in three cases (01, 02 and 15) corresponds to the first half of July. On 02 and 15 on July 30 and on 01, first thing (8:52) on July 31. In these three late cases, the last editor was "Samuel Ros".

o On the .xls files, it is significant that all the project files share the same moment of creation (January 28, 2012, at 4:48:43). All of them were printed and modified in the first half of July. The only one that escapes this rule is the file "Ranking of E-002 2012.xls) that was created later and printed in the first hour of July 31, 2012 (9:03:28). The modification date corresponds to a couple seconds later (9:03:30), which seems to

indicate a "false edition" after printing (ie: when a document is sent to print and any printing option is altered, such as For example, "print two pages per sheet", the application asks if we want to save the changes through a pop-up window, which is often answered without paying more attention, saying "yes" implies altering the document's modification date -and last editor, if applicable.

### **The main question remains:**

Has there been intentional manipulation in a file with different metadata?

It is indisputable that a file can be modified without intentionality. Although the changes in the files do not happen spontaneously or at random, they can only occur intentionally or accidentally, it should be added that there are accidents that are very infrequent, such as the antivirus itself, in intensive exploration, given that the files of office applications are suspicious of hosting macros and these allow viruses to be nested in them, when they are scanned, they allow to change the date or other metadata. However, as we noted, there is a very small chance that this will happen. Other accidents when copying the files from one format to another can alter the dates, but it is difficult to do so with other metadata such as, for example, the version of the tool or the last author of the document. But there are other types of accidents: humans. For example, opening a file to

see it, without trying to manipulate it and, unconsciously, introduce an imperceptible blank space. That would be enough for Microsoft Word to suggest on a screen that typically the average user accepts even without reading, recording the new version. And with that, the metadata have changed.



All this except better opinion to which we submit.

Valencia, January 3, 2026

Signed: XXXXXXXXXXXXXXXXXXXX  
D.N.I. xx.xxx.xxx-X