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**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
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**LATIN AMERICAN AND CARIBBEAN COMPETITION FORUM - Session I: Digital Evidence
Gathering in Cartel Investigations**

- Contribution from Peru -

28-29 September 2020, virtual Zoom meeting

The attached document from Peru is circulated to the Latin American and Caribbean Competition Forum FOR DISCUSSION under Session I at its forthcoming meeting to be held on 28-28 September 2020, via a virtual Zoom meeting.

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Session 1: Digital Evidence Gathering in Cartel Investigations

- Contribution from Peru¹ -

1. Introduction

1. As a consequence of the continuous improvement of technology and the creation of new digital media, many companies around the world have found new ways to carry out their business and communication processes in a more productive and efficient manner, having become increasingly common to find companies that make minimal or almost no use of physical means such as paper in their activities.
2. In the face of these events, the competition authorities and agencies around the world have been forced to adopt new technologies and tools in the development of their cartel investigations, allowing the prompt and effective fulfillment of their functions in the existing digital environment.
3. In the last five years, the National Institute for Defense of Competition and Protection of Intellectual Property – INDECOPI, through the Technical Secretariat of the Commission for the Defense of Free Competition (hereinafter, the Technical Secretariat), has been implementing digital tools that help in the fight against anticompetitive conducts, adapting them to the development of its investigations to increase their effectiveness in cartel detection.
4. These tools are mainly used in the collection and analysis of digital evidence, contributing to the searching of evidence in order to sanction companies that carry out activities that violate free competition.

2. Digital Evidence Gathering in Indecopi

5. Section 15.3 of the Peruvian Competition Act grants the power to the Technical Secretariat to carry out dawn raids without prior notification in the establishments of the investigated economic agents, being able to examine and make copies of the physical, magnetic or electronic files considered relevant, during the dawn raid.
6. During the dawn raids carried out prior to the implementation of the new digital tools, the Technical Secretariat, through its investigative teams, used to perform manually the gathering of digital evidence from the computers of the investigated companies, without any specialized tools or programs, using only computer operating system commands and storing the evidence on external hard drives. Afterwards, this digital evidence was analyzed directly by the investigative team to find relevant information to the case.

¹ The document was prepared by Anthony Ramos, digital forensic specialist and Waldo Borda, lawyer at the Technical Secretariat of the Commission for the Defense of Free Competition.

7. However, over time the volume of information managed by companies has rapidly increased, as well as the complexity in the way this information is stored. All of this, along with the emergence of new technologies, makes easier for companies to hide or delete digital information.

8. Due to these difficulties, the Technical Secretariat decided to implement digital tools that facilitate its work of gathering digital evidence in order to improve the extraction, analysis and search of information processes, allowing the identification and recovery of deleted information and maintain its integrity throughout the investigation.

2.1. Implementation of the forensic laboratory

9. In 2014, after several months of research and preparation, the Technical Secretariat implemented a Digital Forensic Laboratory, acquiring digital forensic tools (hardware and software) for digital evidence extraction and processing, also incorporating a digital forensic specialist as the manager of this laboratory.

10. Among the tools implemented were the following:

Hardware		Software	
Tool	Use	Tool	Use
Workstation Computers	Digital evidence processing	Forensic software	Extraction, indexation, and searching of digital evidence
Hard drive duplicator	Hard drive cloning (bit-by-bit copy)	Hash calculator	Identification and verification of digital files
Write blocker	Read-only protection on hard drives with original evidence	Hex editor	Digital files binary analysis
External hard drives	Digital evidence storage	Virtualization software	Forensic image files mounting

11. Similarly, the implementation of these tools also led to the implementation of documented protocols and procedures, of internal use, for the various tasks performed, such as:

- Digital information extraction
- Digital evidence storage and protection
- Information processing
- Review and analysis

12. Through the use of these tools and procedures, the Technical Secretariat has been able to increase the effectiveness of its inspections, retrieving and extracting a greater amount of information, ensuring the integrity of digital evidence, and, in some cases, automatizing some of the extraction tasks. In addition, investigation efficiency has also been increased by enabling more comprehensive information searches at shorter times and with less investigative effort during the review and analysis stages.

13. All of this has generated a significant saving in time and effort on the part of the investigative teams, which represents a positive balance of the benefits obtained against the cost of the implementation of the laboratory.

2.2. Peruvian experience in the improvement of its forensic laboratory

14. Since its implementation in 2014, and given the increasing number of investigations and dawn raids carried out every year, the Digital Forensic Laboratory has required a number of improvements, in order to increase the efficiency and effectiveness of its processes, implying both the acquisition of new tools and making changes in its procedures.

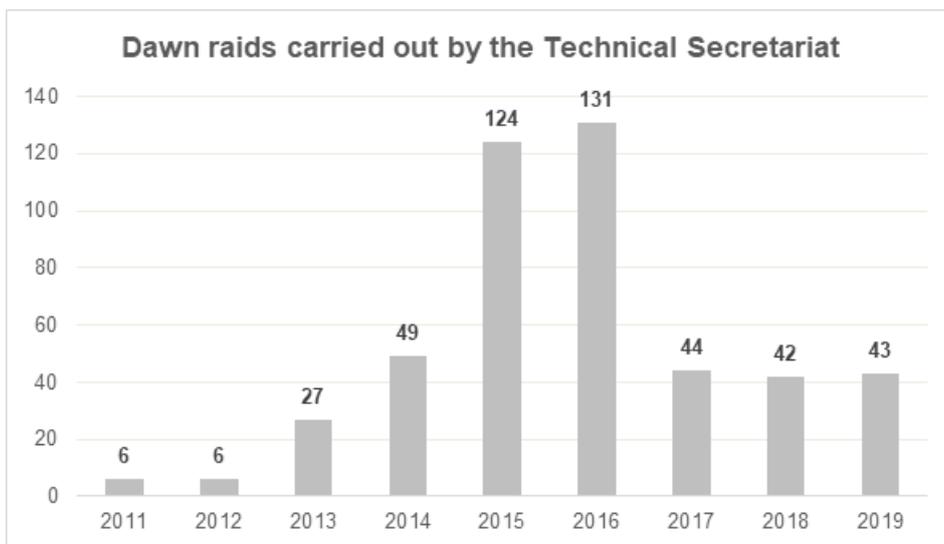
15. Some of the improvements implemented can be seen in the following table:

Tools		Procedures and protocols	
Workstation Computers	Additional computers for simultaneous information processing	Digital evidence extraction	Data acquisition from Mac computers Cloud-based mailbox acquisition. Data acquisition from remote servers Data acquisition from mobile devices
Forensic software	New software licenses with higher processing speed	Digital evidence processing	Parallel processing Optical character recognition (OCR)
Mobile forensics tools	Extraction of digital evidence from mobile phones	Review and analysis	New and more effective information search procedures

16. Improvements to the laboratory have been implemented, taking into consideration several opportunities identified in the execution of dawn raids over the years, as well as the identification of international best practices, gained from the shared experience with competition agencies from other countries such as the Department of Justice – DOJ (United States), the Federal Economic Competition Commission – COFECE (Mexico), the Superintendency of Industry and Commerce – SIC (Colombia), and the National Commission on Markets and Competition – CNMC (Spain).

17. Thus, as shown in the figure below, the investigative capabilities of the Technical Secretariat have improved substantially over the years, resulting in a quantitative and qualitative increase of dawn raids.

Figure 1. Dawn raids carried out by the Technical Secretariat



2.3. Incorporation of forensic tool management into the investigative work of the Technical Secretariat

18. The tools and procedures established by the Digital Forensic Laboratory are used in a cross-cutting manner by all the investigative teams of the Technical Secretariat, according to the needs of each of the investigation cases assigned to them. That is the reason why all the teams have at least two people, among lawyers or economists, who are trained in the extraction, review and analysis of digital evidence with the use of forensic tools. In this way, dawn raids can be carried out simultaneously and effectively in the various investigated companies, without being limited by the availability of the full-time technical staff assigned for the use of forensic tools.

19. However, it is important to mention that, in addition to the forensic tools that have been mentioned, the Technical Secretariat makes use of other tools during the preparation stage, prior to the execution of the dawn raid. These are called *open source intelligence tools* (OSINT tools), which collect information from public data sources over the Internet.

20. Below are some of the sources used during the preparation phase by the investigative staff:

Tool	Use
Google Maps, Bing Maps	Finding of geographical locations of companies
Facebook, LinkedIn, Instagram	Finding of personal or professional profiles of employees
Twitter, YouTube	Finding of news and relevant information of companies

2.4. Guidelines on the collection of digital evidence

21. On July 31st, 2020, Indecopi published its Dawn Raids Guidelines approved by the Commission for the Defense of Free Competition. The Guidelines describe the Technical Secretariat's dawn raid powers and the manner in which they will be conducted, as well as the rights and obligations of the investigated economic agents.

22. The purpose of the Guidelines is to establish clear rules for companies regarding the scope and development of dawn raids, granting predictability to these proceedings and ensuring a balance between the rights of the inspected subjects and the effectiveness of the investigations conducted by the Technical Secretariat.

23. Among other aspects, the Guidelines establishes a reasonable protocol of action when gathering digital evidence during performing dawn raids, guaranteeing the rights of the investigated parties. For this purpose, inspectors will carry out their duties within the scope of the dawn raid, using specialized forensic tools to copy the information that are considered relevant for the staff.

24. Additionally, companies have a reasonable period of time to identify and separate the information that is not relevant to the scope of the investigation (for example, private documents of his personal life). In this scenario, Inspectors will preliminarily evaluate the documentation in order to admit or reject the request of the company, validating whether it is indeed intimate or irrelevant information for the investigation.

25. Finally, the investigated parties are entitled to require the generic confidentiality of all the collected information during the dawn raid, whereby only certain authorized officials of the Technical Secretariat will be able to access such information. Once the review of the information is finished, the Technical Secretariat must communicate which documents are deemed relevant to the investigation, granting a reasonable period for the interested party to specify their confidentiality request. It should be noted that all the information that is not

pertinent or relevant for the investigation will be returned or destroyed by the Technical Secretariat, at the request of the company.

26. Therefore, in the hypothetical scenario that the Technical Secretariat obtains digital documentation unrelated to the facts under investigation, this information will be returned to the parties.

2.5. Difficulties in the execution of the improvements for the collection and analysis of digital evidence

27. As part of its continued action to increase the detection and sanctioning of anticompetitive conducts, the Technical Secretariat has undergone a constant review of the way digital forensic tools have been used in the context of its investigations, modifying in different opportunities its operability in order to increase efficiency in the use of its resources.

28. In the framework of its duties, the Technical Secretariat has identified and flanked a number of difficulties generated as a result of the adoption of these digital tools, that have been evaluated at the time of the initial implementation of their use in the framework of the investigation of anticompetitive conducts.

2.5.1. Increase in the volumes of collected information

29. The adoption of digital forensic tools for the collection and processing of digital information constitutes an important step for any competition agency in increasing its effectiveness in the detection of anticompetitive conducts, allowing to obtain more evidence for the enforcement of cartels, which can be difficult to obtain and identify without this use.

30. However, the use of these tools in the authority's intervention leads to the increase in the volume of digital information that is generated and processed every day, dramatically increasing the amount of time that the realization of digital evidence extraction and subsequent processing can take. This has led for dawn raids, in some cases, to be carried out taking days to be executed and completed, creating discomfort in the companies and the authority.

31. To deal with these aspects, the Technical Secretariat prioritized the type of digital information subject to its diligence, focusing its efforts mainly on obtaining information corresponding to communications using corporate e-mail accounts.

32. In this way, the dawn raids focused the extraction of digital evidence, which in most cases leads to faster and more effective dawn raids. In addition, by reducing the volume of information extracted, this resulted in a reduction in the number of storage devices required and the possibility of a more efficient use of them.

2.5.2. Limited resources to obtain digital forensic tools

33. In many cases, the solutions offered by manufacturers of digital forensic tools correspond to highly specialized or comprehensive products, which are focused on corporate or large-scale work environments. This means for their prices to be significantly increased or for their billing models (one-time payment, subscription, etc.) to not always be the most convenient for competition agencies that are just starting their activities or want to implement them on a smaller or progressive scale. On the other hand, the smaller-scale solutions they offer do not always meet all the needs of a competition agency.

34. In addition, many manufacturers do not have local representation in every country, making it difficult to contact them, make purchases or to have access to the delivery of their products.

35. In the face of these difficulties, the Technical Secretariat established its digital forensic processes using various tools from different manufacturers, throughout the investigation stages. In this way, at each stage a smaller scale tool is used, which complies with everything required in it, integrating effectively with the others, and thus obtaining an adequate synergy throughout the process.

36. This has also generated an adequate and efficient use of the economic resources of the Technical Secretariat, allowing to differentiate the hardware or software, the components that can be fulfilled by non-specialized tools or equipment and of greater availability in the country, reducing the difficulty of searching for companies or local representatives of specialized manufacturers.

3. Implementation of an electronic form to receive applications under the Rewards Program

37. In February 2020, Indecopi published the Antitrust Rewards Program Guidelines, a collaborative mechanism that grants rewards to whistleblowers who provide decisive information to detect, prosecute and sanction cartels that seriously affect consumers in the Peruvian market; provided that the requirements of the guidelines are met.

38. In addition to traditional contact channels such as telephone calls and e-mail, the Technical Secretariat enabled an electronic online form so that interested parties can submit electronically a rewards application for their collaboration, while maintaining the confidentiality of their identity.

39. In this way, citizens who acquired information of any anticompetitive practice can provide valuable support in the investigation in exchange for a subsequent economic reward.

40. Through this tool, whistleblowers can send proof or digital evidence in different formats (documents, images, video or audio) which are stored and protected on internal servers of Indecopi, and then examined and analyzed by the Technical Secretariat.

41. The form can be found in the institutional website of the Commission for the Defense of the Free Competition of Indecopi, and can be accessed through the following link: <https://www.indecopi.gob.pe/solicitud-de-recompensas>.

4. Peruvian experience in the use of tools for virtual meetings

42. Similar to what happened with different entities within the context of the pandemic generated by Covid-19, the Peruvian competition authority has not been oblivious to the use of digital tools for the remote meetings in the framework of its functions, being recurrent to the present date its use by the Technical Secretariat for the conduct of interviews with representatives of investigated companies, coordination and cooperation meetings with other governmental entities, and trainings for public officials and citizens in general.

43. However, it should be noted that the experience of the Technical Secretariat related to digital tools for holding remote meetings is not restricted to the current situation, having previously implemented its use for interviews with investigated persons who are temporarily or permanently outside the country. For the development of these actions the Peruvian competition authority has enabled the use of several digital tools and services, that are currently used for the conduct of remote meetings (e.g. Skype, Zoom, Teams), facilitating for the other parties the realization of activities.

5. Conclusions

44. From its own experience, the Technical Secretariat recognizes the importance of the use of digital tools in its investigations, which have substantially improved the execution of its dawn raids. In addition, the Technical Secretariat is also aware that the mere implementation of these tools is not sufficient to ensure the success of an investigation.

45. It is therefore essential to implement appropriate procedures and protocols for the use of tools throughout cartel investigations, while also establishing the rights and duties that both the authority and the investigated agents must fulfil.

46. Finally, the Technical Secretariat reiterates the importance of the process of continuous improvement when investigating anticompetitive conducts, through the implementation of new tools and procedures, as well as through the use of additional and complementary sources of information, such as the Rewards Program.