



# Cross-border co-operation and education in digital investigations: A European perspective

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## ABSTRACT

Co-operation and education are fundamental issues when dealing with national and international organizations involved in digital forensic investigations. Although these two aspects are often separately handled, they are strictly connected. On the one hand, different agencies can leverage on co-operation for the training of their investigators while, on the other hand, co-operation is possible only if an adequate level of education on digital forensic matters is reached. In this paper, the concrete outcome of a complete training program that involved several European antitrust agencies is reported (named EAT\_FIT, European Antitrust Training in Forensic IT). We sum up the activities and the techniques that are generally used in antitrust investigations, and we outline the rationales used to set up such a training course. Assessment data collected both during and after the training highlight the needs and the difficulties faced by the digital forensic practitioners working in the field.

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## 1. Introduction

“People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices. It is impossible indeed to prevent such meetings, by any law which either could be executed, or would be consistent with liberty and justice”<sup>4</sup>. The above excerpt is from Adam Smith, and it was written more than 230 years ago, at the dawn of the industrial revolution, arguing that free and competitive markets are beneficial to societies. Two centuries

later, these words have been ruthlessly rephrased as the corporate slogan of a United States based organization, one of the world’s largest organization caught guilty in a landmark international cartel in the lysine market: “Our competitors are our friends. Our customers are the enemy” (Hammond, 2005). The fight against cartels, as well as other serious infringements of competition law, represents a strong commitment of all the antitrust agencies worldwide, and in an increasing number of jurisdictions violations of antitrust rules may involve a criminal offense. As stated in Monti (2004), “[i]nternational cartels are undoubtedly the most damaging

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<sup>4</sup> Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, 1776.

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distortion of competition, and their prosecution requires a combination of resourceful enforcement at domestic level and of effective co-operation internationally". Such a stance was later confirmed by the successors of Mr. Monti as EC Commissioner responsible for competition policy, Ms. N. Kroes, who also created a dedicated Cartel Directorate within the European Commission's DG Competition, and finally by the current Commissioner, Mr. J. Almunia. Accordingly, more effective ways of gathering evidence are to be devised by law enforcement authorities. As reported in the ICN Anti-Cartel Enforcement Manual ([International Competition Network, 2009](#)), competition agencies throughout the world view searches and dawn raids "as one of the most effective investigative tools in the battle against cartels". More and more frequently the anticompetitive behavior crosses the border of individual countries, and the capabilities to collect digital evidence according to forensically sound procedures and techniques has become imperative. Within this context, cross-border co-operation and education in the field of computer forensics are to be considered mutually dependent. On one hand, an effective co-operation among law enforcement bodies can be achieved only if an adequate level of investigatory skills is reached; on the other hand, education can leverage on co-operation among different agencies for the training of their inspectors.

In the literature a few attempts to address digital forensics education can be found. [Yasinsac et al. \(2003\)](#) proposed some generic requirements and pedagogical approaches for developing and implementing a forensic program in the higher education environment. The interested reader can delve deeper into the matter throughout [Troell et al. \(2004, 2003\)](#), [Liu \(2006\)](#), [Kessler and Schirling \(2006\)](#) and [Irons et al. \(2009\)](#). Our research, however, differs from the above-mentioned papers due to the peculiar features of the computer forensic environment. Indeed, this work represents an interesting attempt to address the education of practitioners working in this field where transnational co-operation is of utmost importance. It is also relevant to notice that many private companies are currently offering examiner certifications. However, as highlighted in [Mercuri \(2005\)](#), these certifications are not yet regulated by any independent certification authority, thus they need to be carefully evaluated in order to gain recognition. Indeed, both [Everett \(2005\)](#) and [Jones \(2004\)](#) stressed the absence of standards and competencies.

In the following, we will aim to point out the needs and the difficulties of digital forensic examiners working on antitrust investigations, and we will report on the experience gained in setting up a transnational training project. We will outline the rationale used to setting up the training program, and we will discuss the assessment data collected both during and after the training. Furthermore, the feedback analysis will highlight different aspects to be taken into account in similar digital forensic educational initiatives.

The remainder of this paper is organized as follows: Section 2 sums up the role of the European competition authorities in digital forensic investigations, pointing out the main activities performed by these agencies. We detail the rationale used to setting up the cross-border training program in Section 3, while assessment data are carefully analyzed in

Section 4. Finally, Section 5 concludes this work, providing a critical review of the experience.

## 2. European competition authorities and digital forensics

Since 2004, with the entry into force of the Council Regulation 1/2003, which governs the application of Articles 81 and 82 of the EC Treaty (now Articles 101 and 102 of the Treaty for the Functioning of the European Union, TFEU<sup>5</sup>), a network of European antitrust agencies was created: the European Competition Network (ECN). This network ensures an efficient division of work and an effective and consistent application of EC competition rules. The EU Commission and Competition Authorities (CAs hereinafter) from EU member states cooperate with each other through the ECN in several ways, e.g., informing on new cases and envisaged enforcement decisions, coordinating investigations, exchanging evidence and other information, etc.

Under this co-operative framework, the European Commission's DG Competition and EU national CAs have the power to request other CAs for investigatory assistance. This means that a CA may request another CA to carry out a fact-finding measure under its national law on behalf of the requesting CA. As a consequence, CAs may request each other to conduct inspections and dawn raids on their behalf, and, if the assisting CA has the power to copy electronic data on the spot during inspections, it may be asked by the requesting CA to do so in the course of investigatory assistance. Since 2004, a few hundreds of cases have been submitted to the network, and for a significant number of cross-border investigations such an assistance has been requested.

With reference to the use of computer forensic techniques in antitrust inspections, European co-operation began in March 2003, thanks to an informal initiative by the Office of Fair Trading (United Kingdom). At that time, only very few of the CAs were performing real forensics inspections, but the view of the need to have adequate technical resources and legal procedures was widely shared. Interest in this field has been continuously growing and further meetings expected to follow. In particular, the last meeting was held in May 2010 (in Reykjavik), with the participation of as many as 29 different European antitrust agencies. Since 2003, real progress was made in most of the legal issues related to the investigation powers, while progress in technical matters is still lagging behind. The informal group of antitrust FIT practitioners (named European Forensic IT Group) recognized that co-operating agencies need to be, technically, on a level playing field and more resources (both professional and financial) had to be devoted to education in this specific area, because of the high costs of specialized training in computer forensics. As a result, a decision was taken to realize common training initiatives, fostering a real

<sup>5</sup> Agreements between two or more firms which restrict competition are prohibited by Article 101 of the Treaty on the Functioning of the European Union (TFEU). Article 102 TFEU establishes that firms in a dominant position may not abuse that position.

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