



## Border security based on data mining

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(Photo: Thierry Monasse/AFP/Getty Images)

PARIS — Zettafox, a privately owned consultancy, is working on a system to mine big data to help border security officers gauge the risk factor of travelers, a critical area following recent deadly assaults in Brussels and Paris by Islamic State attackers.

A grave concern on frontier control has risen as attackers crossed national borders before staging bomb attacks that left dozens dead in the center of the two European capitals.

Border controls are so important that Britain performs a “security-related” check on all passport holders entering the country, a former senior intelligence officer said.

“The UK conducts security-related checks on the passports of every single individual, including all (European Union) citizens, entering the UK from continental Europe or elsewhere,” Pauline Neville-Jones former chair of the Joint Intelligence Committee, said in a March 25 article in the Guardian daily newspaper.

European border security and a lack of sharing of national intelligence have become highly sensitive political issues.

The Zettafox directors have focused on an algorithm that extends the predictive to the prescriptive, namely extending the function of what might happen to recommending the best action to take.

The consulting firm, founded by Patrick Zerbib and Marc Atallah, worked in late 2013 and early 2014 on a software-driven simulator to demonstrate to a European national border agency a “smarter approach to raising the red flag,” Atallah said.

Zerbib and Atallah developed the prescriptive approach when they were working with Deloitte, an auditing and consulting firm, he said.

Such a border security system allows a “profile” of a potential risk to be drawn by processing “overwhelming big data,” Zerbib said. In the vast “data lake” there is personal information based on elements such as credit cards, Facebook and Twitter social media accounts, and cellphones.

Data science seeks to spot high-risk profiles, he said.

Once the data system flags a warning sign, border officials can hold the suspect for questioning.

“Human trafficking, the abusive movement of people across borders for exploitation, could be better detected by use of the data,” Atallah said.

The collection and use of personal data raise questions over the balance between privacy and data collection, with critics raising concern about the vast gathering of information by the US National Security Agency and UK Government Communications Headquarters.

Frontex, the European Union border management agency, said Tuesday in its 2016 risk analysis the three major challenges on the external borders were: “an unprecedented rise in migratory pressure, an increasing terrorist threat and a steady rise in the number of regular travellers.”

In a presentation to Frontex, the then Zettafox team within Deloitte set out the huge scale facing the European Union border management agency.

Some 720 million air travelers are expected to be entering the Schengen Area by 2030 compared to 400 million in 2011. There are 1,800 border crossing points and 7,721 kilometers of land borders in the EU.

The Schengen treaty allows free passage within the European Union once an EU citizen has entered any of the member states that signed the agreement. Britain is one of the EU nations that opted out of the treaty, allowing a stricter border control for entry on to the island nation.

The attacks in Paris and Brussels, which have killed dozens of civilians, have weakened confidence in the Schengen agreement. In response to the flow of refugees and migrants, some EU countries have installed new border controls and razor wire fences.

Zettafox, which offers a “smart gate” solution to spot potential security risks, has developed a simulator to show how such a system can work for border officials and could be used by Interpol and the European Commission, Atallah said.

The consultants see interest among airlines, banks and insurance. Port authorities could use the simulator to conduct selective checks of containers based on the simulator mining data on shipments.

Zettafox will be soon be seeking development capital of a few million euros to keep up with a high-growth market, Zerbib said. The venture capital would allow the company to speed up development and expand into new markets.

The company, which has offices in Paris and Washington, has set a six-month target to sign up one or more financial and business partners.

Thousands of refugees have camped in and around Calais, northern France, hoping to cross the English Channel to enter the UK, which has a relatively dynamic economy and does not issue official identity papers.

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