



World Standards Day 2011 Conference - Brussels, 14 October 2011  
Dr. Uberto Delprato's speech

Thank you Mr. Chairman for your introduction and for setting the scene of an interesting panel discussion. I would like also to thank the organisers of the Conference for inviting me to share with you all my views and experience on the importance of standards for an SME.

As already told by the chairman, I am founder and CEO of IES Solutions, an Italian SME based in Roma and Catania (Sicily). You may easily guess our primary markets by knowing the full name of the company: Intelligence for Environment and Security. The second part of the company's name, Solutions, is a clear indication that we exist to deliver products and services that solve our customer's need.

Today I would like to share with you our experience in entering the extremely challenging market of services for data exchange in Emergency Management. When I have to describe more precisely what this means, I often fight with the use of the word "interoperability". It is quite a difficult word (even to pronounce!) and hides inside it a large number of concepts. Basically it means "make different systems able to operate together". Indeed, in Emergency Management it can be seen as the primary need at all levels for taking decisions and managing operations. First responders that need to share working tools require that those tools can operate together. Chief Officers that need to communicate on the field need radio and devices that can operate together, regardless of the Organisation they belong to. Decision makers are eager to receive more and more information provided by several different IT systems that must operate together. This list may go on and on up to the political agreement between Member States that take the decision to operate together in specific emergency situations. Interoperability is everywhere and, arguably, brings with it the need for common rules on how to build tools, configure devices, program computers for sharing files, understand terms and so on.

We tend to give most of such "agreements" for granted. While I am here talking to you, we have already agreed on a lot of common rules: English as a common language is the clearest example, but even the way we describe addresses, send emails around or phone each other is based on a set of underlying agreements. Well, when you are out fighting against fires or searching for people under the rubbles of a collapsed building, you may find that most of such "agreements" are not fulfilled: first responders may use different radio systems, may not talk the same language, they may even not name things in the same way!

But I am not here to teach you a lesson on interoperability in Emergency Management, but rather to stress how important is the definition of common standards (yes, finally the magic word) when human beings and machines have to cooperate under stress for saving lives.

We, at IES, have decided to first study and then enter the market of data sharing between man-operated systems, i.e. those systems used by operators for inputting information and decisions and that ideally should be able to distribute such information with other systems operated by colleagues of different organisations.

Since international cooperation does work in emergency, you may think that this is not a problem, or it has been solved or, at least, it is not as important as I am putting it. Well, this is not the case. Most of the times, cooperation is based on procedures and on the great flexibility and willingness of prepared and motivated individuals. The sharing of digital data is usually achieved with ad-hoc solutions, sometimes implemented by industries that are able to deploy excellent systems with limited ability to *interoperate* with systems of other vendors. This is where we have decided to focus our research.

In addition to this, we had to set ourselves another ambitious goal: not just study an interesting research topic, but enter, as an SME, a market typically owned by large industries. It was clear that the only way we had to achieve this was not to fight for replacing existing vendors and their products with new products, but rather to put a new "interoperability layer" between such systems.

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It is also straightforward to say that such new layer we had in mind could not be yet-another proprietary standard: no, it should have been something accessible and usable to all stakeholders to leverage their existing systems without being bound to a specific vendor. At the end of the day, the concept of interoperability is a many-to-many concept: the more actors will be adopting our approach, the more impact the envisaged data exchange will have in emergency Management.

We were brave in launching such initiative in 2006 and, as they say, fortune helps the brave. We got an important boost to our research by the European Commission that awarded a project of ours, named REACT, with a grant under FP6. The importance of REACT was not just the availability of financial resources, but the European breath that our concept received, with Emergency Organisations from different Member states contributing in the definition of common requirements and in the testing and validation of the concept.

The result of this effort was the definition of a combination of pre-existing de-facto standards (such as the Common Alerting Protocol and the ATOM-FEED standard) offered to Emergency Organisation together with a set of working tools available as a playground.

I repeat again the concept here: the result of REACT was a non-proprietary standard that anybody can adopt as a basis for his or her implementations. As most of you know, even the best standard fails to become a successful one if does not become the basis for real application, applications that are clearly useful. An "Early Adopter" was needed to make this happening. And we had it: the Italian Ministry of Interior, Department of Fire Fighters.

They shared with us and the other REACT partners the path leading to the first definition of the standard and then, after the end of the project, the issued a formal decree describing the adoption of the new "data interoperability" concept. A full description of the related protocol was also published, making it a de-jure standard (for Italy).

Since then, a number of concrete applications has naturally stemmed out.

In 2009, a specific application was developed for managing the aftermath of the L'Aquila earthquake, particularly for sharing information about the activities on historical buildings. Notably, a subset of the complete information was available to journalists and general public via the website of the Department of Italian Fire Fighters.

Later in the same year, a dedicated CAP-based system was delivered for coordinating operations against forest fires. An estimate by the Department of Italian Fire Fighters on the impact of such application on forest fires was reported as "a reduction by 40% of the time of arrival at the fire site". This mainly because the different Organisations involved in the management of forest fires (Civil Protection, Fire Fighters, Forest Guards, Volunteers) were able to share a Common Operational Picture on the situations and agree more efficiently on the needed countermeasures.

Recently in 2011, an new application of our CAP-based suite of product (under the commercial name JIXEL) was developed for empowering deaf people to place emergency calls with the Italian Fire Fighters emergency Number 115. Such application, named 115-4-DEAF, was launched by CNVVF during the 2nd International Conference on Interoperability held in Venice on 19th May 2011 and it is now in testing phase in Veneto Region.

Eventually, on 21st June 2011, the Italian Ministry of Interior, Department of Fire Fighters, released an official decree about the full adoption and the CAP protocol as "CAP Italian Profile", along with templates and mechanisms for a full exchange of message with any other Organisation.

The system developed by IES for the Italian Ministry of Interior, Department of Fire Fighters is now part of a roll-out plan throughout Italy (starting from Veneto Region).

In the meantime, IES continues to work together with several Emergency Associations across Europe to foster the adoption of a European profile for CAP messages (very much alike what they did in Canada and, partly, in the US).

As you can see quite an impressive list of achievements for a small company in a market traditionally reserved to big companies leaders in the GIS market or in the defense market. It is not

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a secret that only reason for this (besides the quality of our products, let me say) is that we always gave our customers solutions based on standards that they could freely reuse and include in other applications. One may say that this is commercially a huge risk: since our customers have full knowledge of the standards we have been using and such standards are fully reusable, are not we at risk of being dumped by them? Yes (as it is always the case, I may add), however with an open standard as a basis for any applications, the game is fair: any company (being it a large TELCO or a micro-SME), have common ground for developing new products and services.

And this is, dear audience, the core of my experience. Proprietary standards may protect your market and allow you to make a lot of money, but they require a huge effort for defending them by the waves of changes. Technological and societal changes always call for new products and if you have invested a lot in building your products, you are naturally reluctant to changes.

Even in a conservative market, as the safety and security market is, the ever growing requests for new functionalities and international integration is a formidable push that only open and flexible approaches can exploit: “when the wind of change blows, some build walls, other build windmills”.

With our decision of defining a standard, keeping it open and making users able to use it and touch with their hands its advantages, we believe we have succeeded in fulfilling our fool’s dream: create the basis for a new generation of interoperable IT systems for the benefit of all citizens.

(Let me say that opposed to the fool’s dream, there is the CEO’s nightmare: make business out of this nice story!)

I am now close to concluding my short speech. There is lot of opportunities out there for good products but if you are an ambitious SME and you want to compete in large markets against big industries, strive for a fair playground. Standards are a unique opportunity. They request focus, perseverance and investments, but in return you will be given a chance to compete at any level.

We are planning a new wave of products based on web2.0, social networks, apps, you name it: would we have had any chance to offer them to the market without a standard that makes them 100% compatible with all other systems? No, we would not. For now, in Italy, but Europe is not far.

I hope the experience I shared with you today has been of interest to you and maybe inspirational for some of you.

Thank you very much for your kind attention, thank you.

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