A new system accelerates verification of printed electronic documents

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Researchers at the Universidad Carlos III in Madrid (UC3M) have designed a system that speeds up online administrative procedures by automatically verifying and validating printed electronic documents, a process that had been done manually up until now.

With the law known as Ley 11/2007, regarding citizens' electronic access to public services, going into effect, electronic documents have gained full legal validity. When a document of this type is printed out, it must be accompanied by its Código Seguro de Verificación (CSV- Secure Verification Code), which is validated in the central office or on the web page of each entity. And each body usually has it own CSV generator and its own validation page, which slows down electronic bureaucratic procedures that involve various entities. "The purpose of this project is for our system to become the only one needed to generate and validate universal and officially approved CSVs for all the different public administrations in Spain," say the creators of Valid@doc, a multidisciplinary team of engineers, and jurists directed by Antonio de Amescua, tenured professor of computer science at UC3M, and led by Pilar Aránzazu Herráez and Javier García Guzmán.

Valid@doc speeds up bureaucratic procedures that involve several public entities. "Normally, the civil servants have to manually check each document one by one, access the web page of the emitting entity, determine whether or not the information the document contains is accurate and then certify it," comment the researchers. With the tool that they have designed, it is possible to automatically read the CSV from an authentic paper copy, pull the corresponding original electronic document from the emitting entity's repository of electronic files so that it can make a comparison and confirm its authenticity and entirety.

More secure cooperation among administrations

This system has been recognized as one of the best consolidated projects related to interoperability and security by the IV Congreso Nacional de Interoperabilidad y Seguridad (CNIS 2014 – the IV National Congress on Interoperability and Security), which will be held on the 19th and 20th of February in Madrid, and in which the researchers will present their findings. These include a proposal for best practices for unification

in the creation, presentation and automated reading of the CSV of electronic documents by Spanish public administrations. In fact, Valid@doc has been designed to resolve critical issues in the system, which were identified thanks to a study of electronic documents from one hundred of the most representative head public offices in Spain, as well as of the handling of those documents in the registry area of the Leganés city hall.

"The city government's collaboration with the University has allowed us to test our project in a real and practical scenario, especially at a time when the administrations are in a period of transition, moving from a traditional model of public services to the current one, which requires citizens to have electronic access to those services," comments Pilar Aránzazu Herráez. Thus, the project is now in a testing phase. According to the researchers, the next step will be to attempt to validate the system in general administration offices of the national government. "After that, and once we have that "*know how*", we will be able to put the tool into use in a more formal way in various different administrations," points out Javier García Guzmán, of UC3M's Computer Science Department. "That would be when the creation of a single official area for CSV validation would go from being a challenge to becoming a reality that would position Spain in the lead in the field of electronic administration," he concludes.

Moreover, according to the researchers, this system would resolve the current problem of having an automatic, unified validation for all public administration. The new model in use allows us to conjure up the real danger of a break in the chain of legality of the printed documents whose original is an electronic document with CSV, since in many cases they are treated as simple photocopies. The unification of criteria in the generation and presentation of the CSV will allow greater usability, accessibility and security for the administration as well as for the public. "It will be much faster, given that any citizen will be able to access a

single head office, and will not have to look for that of every emitting entity, which held the risk of having to guarantee the legal validity of each and every one of those individual head offices", explains Pilar Aránzazu Herráez.

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