



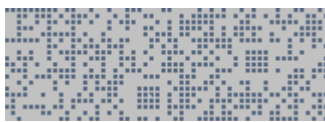
Secure and Authentic Paper Documents



SECURITY EXTENDED

Process consultants have envisioned paperless office and pure electronic processes for the last two decades. Today it has become clear that the coexistence of electronic and paper based processes is here to stay for coming years.

While electronic document security solutions approach maturity, supplemental system components eliminating “traditional” security holes, such as the security control of printed documents, have not been available



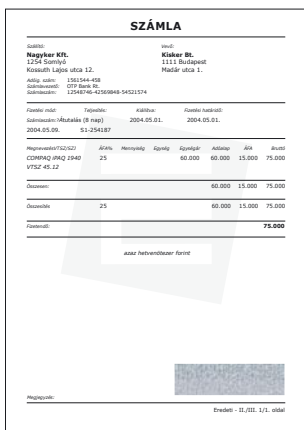
WHAT IS DOCMARK?

Currently, in case of paper documents authenticity is provided by security elements that are very difficult, and/or too costly to forge compared to the value of the document (signatures, stamps, special quality paper and printing technology, etc.). The document security system developed by E-Group extends the security concepts currently associated with electronic documents to the physical space. The created paper document provides the same features for identifying the issuer, integrity of the document, and for non-repudiation, as its electronic counterpart. This makes paper documents an integral part of the IT security system of the given organization.

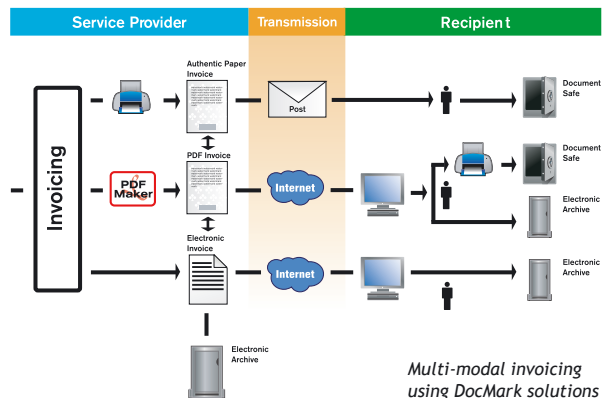
- Works over a standard office infrastructure,
- Uses security elements with which the end user can clearly identify the issuer and the content integrity of the given document (and its authenticity according to the regulations of the given organization)
- The reliability of the used security elements is provided by algorithmic/cryptographic methods, rather than physical elements
- The authenticity of the paper document can be ascertained with high degree of security off-line, without access to external certificate authority, or database.

DocMark is a modular product suite based on digital signature, digital watermarking, and high storage capacity 2D symbols technologies that enables the creation of secure and self-authenticating paper documents in a highly customizable manner using standard desk-top tools:

- Integrity of the content can be ensured by storing and printing textual information on the page using 2D storage symbols, and symmetric key encryption.
- Text body can be protected using digital watermarking, by printing watermarked graphical element behind the text.
- In controlled environment copies of the original can be distinguished, or fraudulent alterations can be detected using fragile digital watermarking.
- Authenticity, Integrity, and Non-repudiation features can be added using digital signature technology.



Security components used in DocMark documents (Digital Watermark is pictured here symbolically)



E-commerce

Many electronic commerce processes can be extended using DocMark. Besides invoices, e.g. downloadable warranty forms, certificates, etc. can be downloaded and printed by the customer in authentic form.

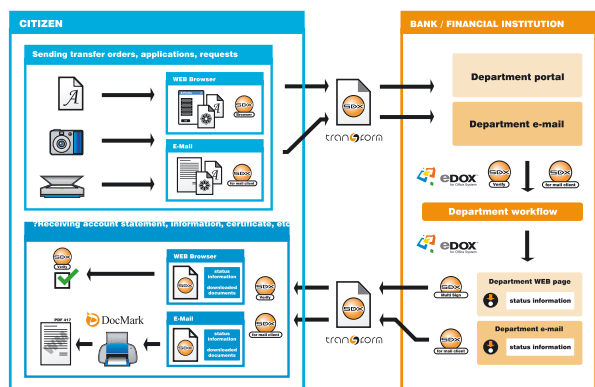
Government, local government processes:

E-Government or Internet based local government services can be transformed into end-to-end services, e.g. the citizens are able not only to submit a request for a copy of an official document (e.g. birth certificate), but also to receive the subject of the request, by simply downloading and printing, instead of having to wait for the post. It also saves the cost of postal services for the issuer.

WHERE CAN IT BE USED?

Invoicing

While electronic invoicing is gaining momentum, a significant portion of clients still receives paper invoices. Basically all public utility companies and service providers create, process, and store invoices in electronic form. With the use of DocMark technology, paper invoices can be integrated into the electronic workflow.



FURTHER INFORMATION

The digital signature, digital watermarking, and 2D printable storage technology used in the solutions described above have a multitude of possible applications. The experts of E-Group have comprehensive knowledge and experience about the integration of the various solutions into the business processes of the target organization. If you have any further questions regarding



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