

Freely distributed electronic document creation and validation software tool

The software tool for the freely distributed electronic document creation and validation is publicly available and is to be used without any restrictions according to the function ascribed. The software tool as a service is dedicated to creating and validating signed electronic documents, which format conforms to the Specification ADOC-V1.0 of the Electronic Document Signed by the Electronic Signature, approved by the Lithuanian Archives Department under the Government of the Republic of Lithuania (since 2011-01-01 Office of the Chief Archivist of Lithuania). The Specification is available at: https://signa.mitssoft.lt/signa-web/webResources/docs/ADOC_specification_approved20090907_EN.pdf

The software tool allows creating and editing ADOC documents, visualize their structure and validate their content. Moreover, Signa Web allows signing either the whole document or only its selected parts (including documents or metadata) using various secure signature creation devices (SSCD), such as identity cards, other smartcards, USB keys, and mobile signature services offered by mobile network operators. The tool works with the majority of popular Internet browsers (Internet Explorer, Mozilla Firefox, Google Chrome or Safari) running on Windows, Linux or Mac OS X operating systems.

The software tool provides for the creation of electronic documents by the institutions which do not have e-document management module in conformity with the ADOC-V1.0 specification, installed in their IT document management systems. The software tool could also be used by the institutions which are facing the necessity of the validation of the e-documents received.

The software tool is going to be developed, and it will provide the possibility of electronic signing of document on the mobile phone.

The software tool as a service is related to the Malmo Declaration Priority 3 (Efficiency and effectiveness is enabled by a constant effort to use eGovernment to reduce the administrative burden, improve organisational processes and promote a sustainable low-carbon economy).

The software tool enables the persons with no special equipment (document management system, etc.) to create and to validate the received document. It must be noted that a document, created with the use of this tool and conforming to the ADOC specification, is saved in the zip package and sent as a separate file to other users by e-mail or other IT means.

The software tool was implemented according to the initial requirements to be available as a public freely available online service, as well as a freely distributed desktop application. On-line service should be accessible from all major operating systems using all major Web browsers.

The service is implemented using Java programming language and platform, ensuring their wide availability. The Java platform comes with a wide range of the third party (free and open source) libraries and frameworks, allowing the implementation of key functionality of the created services. E.g., libraries for XML processing, XML digital signature support, Web services communications, etc.

The implementation of the service also includes Signa SDK libraries, providing complete Java API for ADOC document management. The service is available as a Java Web application that

may be executed on any Java Servlet container or Java Application server. The Web application is implemented using Apache Wicket framework. This framework offers a great flexibility in the implementation and integration of Web application modules and components, including those providing the graphical user interface. The desktop application is implemented using Eclipse RCP platform, which also allows us to build cross-platform applications.

In 2011, during the Conference “E-democracy: to be Introduced” of the NGO initiative “Aš Lietuvai” (“I for Lithuania”), the Office of the Chief Archivist of Lithuania received an award “E-Achievements of Lithuania” in the nomination of “E-Achievement: National Strategic Innovation” for the uniform electronic document ADOC/MDOC.

The software tool ensures the compatibility of the signed and legally valid e-documents and the necessary metadata transfer among natural and legal persons, or state institutions. Employees of the public institutions, which do not have the document management system, can obtain the necessary skills while creating and signing the e-documents. The tool can be used for educational purposes; it also encourages the use of the e-signature, as well as e-documents.

The use of the tool is free of charge, which promotes the reduction of the administrative burden endured by organizations or natural persons.