

OpenSign – An Open Source Digital Signature applet

The open source project OpenOCES is established as a part of an agreement between the Danish Ministry of Science, Technology and Innovation and TDC. The purpose of OpenOCES is to create an environment where software companies and others with interest in digital signature can develop open source components for the OCES infrastructure.

The project offers a useful component, OpenSign, which adds digital signing functionality to standard internet browsers without extra plug-ins. The component is developed as a Java-applet and as a consequence it can be used in Microsoft's browsers as well as any other Java-enabled browsers in the market, including Mozilla Firefox and Apple's Safari.

Currently the OpenSign applet is deployed with success in a number of business critical internet based solutions. A few examples:

Tax Authority- Tax Information Transfer

For some banking businesses, e.g. loan applications, the bank requires information from the customer's annual tax information sheet. The Danish Tax Authorities has developed a solution where the customer can authorize the tax authority to transfer the information to the bank electronically. The customer accepts the transfer of the information using the OpenSign applet.

NemKonto (EasyAccount) - Registration

In Denmark all payments to citizens are transferred to an bank account registered by the citizen in a central system called NemKonto. If a citizen wants to register or change information on a registered account this can be done online using OpenSign.

Webreg - Public Registration of Businesses

The majority of public registrations of new businesses is currently done online using the National Danish Commerce and Companies Agency's registration application called Webreg. This application was one of the first Danish digital signature enabled solutions, but in the first version it was only developed for users having a Microsoft platform because it was based on ActiveX-technology. Today Webreg uses the OpenSign applet in order to support customers using non-Microsoft platforms.

New Initiatives

Currently OpenSign can be used for signing "raw text", but the project wants to enhance the functionality of the component to support signing text with attached files. This gives an opportunity for developing a variety of new applications. Again a few examples are given:

Example 1 – Attached maps:

Solutions with a need for an applicant to sign information related to a certain geographical location can use a solution supporting attachments. A map with indication of the location can be attached to a signed text. This scenario could be relevant in a solution for applying for a permission to put pipes or cables in public ground.

Example 2 – Standard forms:

Solutions with special requirements to the visual presentation of the signed information (e.g. standard forms or standard license agreements) can attach these as files in the preferred format

Example 3 - Extra documentation in an application

An application (e.g. for a building permit) can be supplied with extra documentation such as pictures or drawings. In electronic form this information can be attached to the signed text using the applet.

Using standards

The output signature format of OpenSign is based on the international and open standard XMLSignature, which ensures an independency of platform and software provider now as well as in a future perspective. The applet is free and the license ensures that the source code remains open. The applet is not specific for TDC's OCES digital signatures, but can be used for any digital signature infrastructure based on the X.509 standard.

Further reading:

<http://www.OpenOCES.org>