

# PDF Signing for Adobe CDS - Example - Modified after Certification

Certified Document Services (CDS) provides a cost effective PDF digital signing solution.

## How it Works...

Certified Document Services (CDS) is a service which is enabled by the Adobe Root Certificate Authority and was introduced into the Adobe® Acrobat® product range supporting SHA-256 from version 7.0 onwards. CDS empowers document authors to digitally sign Portable Document Format (PDF) files, using an industry standard X.509 digital certificates chained to the Adobe Root Authority to allow automatic validation of authenticity of the author using the free Adobe Reader software. No additional client software or configuration is required. A major advantage to any organization with stakeholders in multiple countries, is the built-in international language support within the PDF reader itself. Available in over 30+ languages, Adobe Reader ensures a consistent digital signature experience worldwide. CDS was designed specifically to enable any organization providing documents to large and disparate recipients, who may be in multiple countries, to increase the assurance level of the document. The document's integrity and authenticity are digitally preserved by the addition of the CDS signature to the PDF. Document authors are able to increase this assurance level without requiring recipients to deploy additional processes - it simply works, ensuring an effective ROI through a vast reduction in the investment normally associated with supporting a proprietary security system. Adobe's simple to interpret "Blue Ribbon, Yellow Warning Triangle, and Red X" trust messaging allows even novice users an easy to understand method to determine if the document is legitimate.



This example document has been signed with a CDS compatible signature, however, after the PDF has been signed, it has been modified slightly. The modification is subtle and only a single byte has been changed, however the integrity checking system built into the PDF reader is able to compare the 'hash' i.e. the digital fingerprint of the file, with the hash which is stored in the document and locked down by the signature process. Although the signature authenticity is valid, the integrity checking fails and it is not possible to highlight what was changed - The document is therefore protected from any modification.

## Solutions by Industry

### Electronic Invoicing

Electronic VAT invoicing offers numerous advantages to organizations both large and small – cost reductions, low carbon footprint ecosystems, greater security and trust for all stakeholders and faster cash collection than traditional out-dated paper billing. <http://www.globalsign.com/solutions/compliance/e-invoicing.html>

### Healthcare

The New England Journal of Medicine, 2004, reports "paperwork represent 31% of all healthcare costs". CDS can help relieve the burden on physicians surrounding cumbersome processes involving patient paper-work while being part of a CFR 21 Part 11 compliant solution. <http://www.globalsign.com/solutions/industry-solutions/healthcare.html>

### Manufacture and Design

Architecture, Engineers and Construction (AEC) professionals benefit from CDS with faster design collaboration, more efficient and less expensive electronic document storage and stronger protection via tamper evident engineering and product documentation as documents are exchanged among customers, partners, contractors, and building departments. <http://www.globalsign.com/solutions/industry-solutions/manufacturing.html>

### Education

More and more educational institutions are increasing student and alumni satisfaction as universities and colleges disseminate sensitive documents like transcripts and admissions letters electronically in a fraction of the time and costs seen with their paper equivalent. <http://www.globalsign.com/solutions/industry-solutions/education.html>

### Government

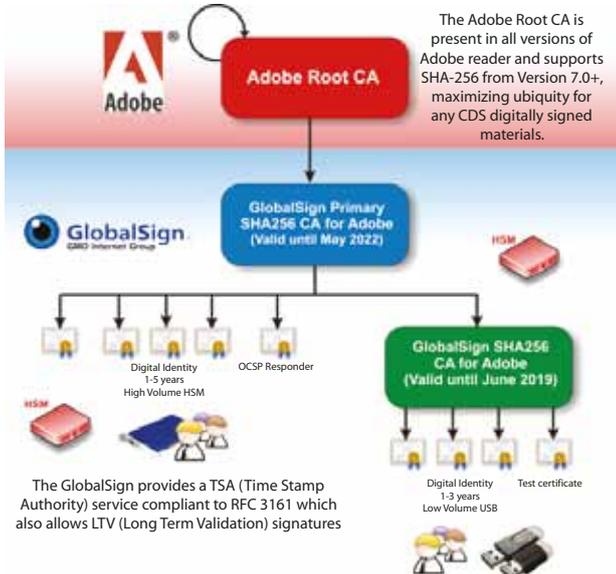
CDS supports both local and federal government initiatives including the Government Paperwork Elimination Act helping reduce costs, enhance citizen accessibility to government information, and reduce unnecessary environmental waste while at the same time providing high assurances to its citizens that the information is legitimate. <http://www.globalsign.com/solutions/industry-solutions/government.html>

### Financial Services

Industry best practices coupled with government imposed regulation like Sarbanes-Oxley make CDS an attractive option as a thorough audit of the signature properties are embedded in the document itself. Well after the Digital ID expires, the signature characteristics are preserved providing relying parties strong authentication of both the organization and individual or role that signed the PDF, whether the content is still intact, and the exact date and time of the transaction as determined by a RFC 3161 compliant time-stamp. <http://www.globalsign.com/solutions/industry-solutions/financial-services.html>

### The Notarial and Legal Professions

CDS provides unequalled support of trusted documents in multiple languages. This alone facilitates cross border transactions as both sides are able to interrogate the authenticity of a document in their local language; the ideal solution for eNotarization. <http://www.globalsign.com/solutions/industry-solutions/notary-legal.html>



What you should see!

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