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## **INDORSE CERTIFY (IC) Services**

### Online Processes with Trust

February 2010

#### **Definition**

IC services are performed via a portal that indorses client's documents by verifying the authorized signatories' biometric features online. After that IC certifies the document using certified document services. IC documents can be sent to recipients by linking to the portal for downloading the document or by sending them directly via email. The IC documents are designed for legal documents, blueprints and contracts; bank statements, account updates and invoices. You can use IC services to:

- Authenticate document contents
- Verify author identity and signatories biometric signatures
- Real-time assurance
- Reduce cost with paperless processes
- Improve customer confidence

Once registered with IC, the documents signatories can upload and sign biometrically using a pen and a digitized pad their documents, then IC certify t by Trusted Authority, can certify documents to be used in Adobe® Acrobat®, Adobe® Reader®.

The two major added values to Adobe CDS are:

1. The ability to authenticate any word document and convert it to Adobe PDF.
2. The capability to authenticate user biometric signature and once they are authenticated, IC issues the certified indorsed document.

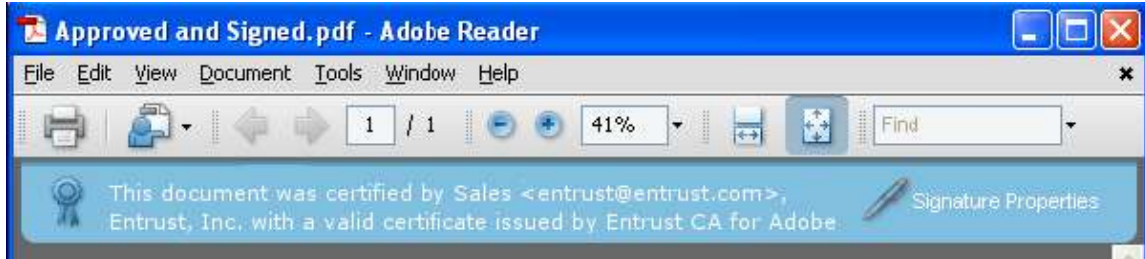
Each time a user opens a PDF that was certified with an IC certificate, a visual ribbon is displayed across the top of the application. This ribbon is not on the document itself, but appears as an additional toolbar within Acrobat Reader (Version 6 or greater).

### A Valid Biometric Signature

Once a signature approval is requested to a document the registered signatory enroll his signature using an electronic pen and a digital pad/screen. The system compares this signature with the preregistered signatures. If the comparison is within the approval limit then the Signatory Identity is verified. The signature image and information is inserted in the document.

### A Valid Digital Signature

Once the integrity and validity of the signature is successfully verified, a blue ribbon icon appears on the ribbon (pictured below). This is a **certification signature**, which verifies the author and the integrity of the document. Because the document is confirmed to be the exact document that was signed by the author, it is known as **non-repudiation**.



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## How to use the IC Services

IC is different from the other Adobe CDS providers because we use Biometric Signature to add the intent in signing any document which Biometric signature gives only.

### Step 1 Upload Document



### Step 2 Sign Document



### Step 3 Send Certified Indorsed Document to Recipient



## Real-World Applications of Adobe CDS<sub>2</sub> and IC

### Healthcare

The healthcare industry has been under increasing pressure to reduce cost and provide a more streamlined approach to patient care and product delivery. A natural response to these pressures is to move documents online, but healthcare organizations have been slow to adopt electronic records. Released in March 2009, a 2008 study by the New England Journal of Medicine found that only nine percent of U.S. hospitals have implemented health information technology.<sup>3</sup>

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There is immense opportunity to streamline security and improve the flow of information by moving healthcare records online. In the US, the Health Insurance Portability and Accountability Act (HIPAA) specifies that data corroboration, including the use of check sum, and digital signatures should be used to ensure data integrity.<sup>4</sup> Adobe CDS documents provide full-document digital signatures and ensure the entire document has not been altered, thus providing compliance to this aspect of HIPAA. Similar laws exist in other countries for healthcare.

Within healthcare, the pharmaceutical industry requires secure electronic signatures when new drugs are brought to market. Information from clinical trials, quality control records and scientific data consume an immense amount of paperwork that could be easily brought online.

The U.S. Food and Drug Administration (FDA) recognized the need for a secure way to submit drug information, especially in light of revelations that paper signatures were at risk for falsification. The Code of Federal Regulations (CFR) Title 21 Part 11 deals with guidelines on electronic records and electronic signatures in the US. It defines the criteria under which electronic signatures can be considered valid.

Beyond simply bringing drugs to market, it also defined electronic signatures for ongoing clinical information and pharmaceutical manufacturing. Adobe CDS certificates are ideal for certifying and signing FDA paperwork because full-document validation is required. Although not mandatory, a timestamp is strongly recommended.<sup>5</sup> Entrust Certificates for Adobe CDS provide a time-stamping feature.

## Education

Several processes in the educational space have been under consideration for automation but have been stymied by the need for secure, trustworthy automation.

For example, the process to automate transcripts could save mountains of paperwork, but these transcripts are notorious for becoming falsified. Usually the need for a transcript is for employment purposes, so a fast turnaround is crucial. Educational institutions, however, need to reduce costs on courier and mail services.

By enabling Adobe CDS certificates, the transcripts can be certified and signed by registrar offices in a fraction of the time and cost it normally takes educational institutes to carry out the same task. Delivery of these transcripts can now be accomplished electronically.

Extending beyond transcripts, certified and signed documents can also be used by universities for extending admission letters, financial aid documents, grant letters and even diplomas.

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## Government

Governments around the world have enabled legislation to varying degrees that define what is acceptable for a digital signature. Now that legislation is in place, applications abound where a certified document would allow governments to interact better with citizens.

Digital signatures have been available to government departments and agencies for some time, but were often focused on signing for internal use. Having digital signatures available for citizen use was problematic because citizens did not likely have the technology and know-how readily available.

Adobe CDS certificate-signing takes away the complexity of digital signatures for recipients because most citizens who have access to a personal computer likely have Adobe Acrobat or Reader reading capabilities. Now that CDS certificate applications are possible, the opportunities are endless, some examples of government-citizen applications are:

- 1 • **Patent documentation** to ensure that the author of the document has certified and not altered the document and that the patent grant has not been altered.
- 2
- 3 • **Real estate transactions.** Every real estate transaction requires a mountain of paperwork including land survey documents, land transfer tax documents, agreements of sale and purchase, title search documentation and municipal tax documents to name a few. All of these highly sensitive documents not only need to be certified, sometimes need an electronic approval signature.
- 4
- 5 • **Copyright forms.** Signing and certifying copyright forms not only ensures they do not change, but also adds a timestamp to resolve disputes on the first use.
- 6
- 7 • **Tax returns.** Every government has them. It would make sense to offer them in a downloadable format that citizens can trust.
- 8
- 9 • **Forms.** All departments in all levels of government have forms for citizens to fill out. Certifying forms using Adobe CDS certificates assures citizens that they have authorized forms.
- 10
- 11 • **Permits.** Municipal governments require building permits for most work that citizens and contractors want to carry out. On the one hand, contractors can certify the required engineering documents and submit them online in addition to approval signatures on the certified online forms. On the other hand, citizens can download certified forms to apply for permits themselves. To avoid fraudulent permits, the municipality can deliver certified and signed permits to the applicants electronically.
- 12
- 13 • **Census.** Delivering census information and reports as well as sending out census forms can be easily accomplished with Adobe CDS certificates.

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## Insurance & Finance

Banks all over the world are reeling from financial difficulties from the collapse of bad credit and the decline of the world economy. Shoring up costs has become a priority for the struggling sector and that can mean automation and moving processes online.

The biggest boost to these efforts in the United States was passing of the Electronic Signatures in Global and National Commerce Act (ESIGN), which essentially validates proper digital signatures as valid.

Similar legislation acknowledged the validity of digital signatures in other countries. This provides the confidence of a legal basis for financial institutions when utilizing digital signatures in online processes.

Some examples of these processes are:

- 1 • Trading instructions
- 2 • Loan applications
- 3 • Credit investigation
- 4 • Loan processing
- 5 • Mortgage papers
- 6 • Insurance applications and claims
- 7 • Trading confirmations
- 8 • Insurance/Bank statements

The potential savings is tremendous, yet not without challenges. One such obstacle is that digital signatures have to “live,” in some cases, for up to 30 years. Fortunately, Adobe CDS certificates feature signing details such as the online certificate status protocol (OCSP) that allows the signature to live on in perpetuity.

Another challenge that the financial services industry faces is increased regulations such as Sarbanes-Oxley (or SOX). A key aspect of SOX regulation is the necessity to bind critical transactions to key employees in an auditable format.

Adobe CDS certificates directly address this need by tying the author’s digital signature and timestamp to prove information was made available (or reviewed) at the right critical times. These digitally signed PDFs provide a perfect audit trail.

<sup>1,2</sup> “Establishing Trust with Online processes” Entrust, WP\_AdobeCDS\_09.pdf, Apr 2009.

<sup>3</sup> “U.S. Hospitals Slow to Adopt E-Records,” Jacob Goldstein, The Wall Street Journal, March 26, 2009.

<sup>4</sup> “Health Insurance Portability and Accountability Act of 1996; Public Law 104-191,” 104<sup>th</sup> United U.S. Congress.

<sup>5</sup> “Guidance for Industry: Part 11, Electronic Records; Electronic Signatures — Scope and Application,” U.S. Food and Drug Administration, August 2003.