

Digital Signature and Long-term Archiving in Adobe PDF

(**Adobe PDF** 的電子簽名與長期保存)



The global standard for trusted electronic documents and forms

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Adobe Standards

Adobe Standards Participation

- <http://www.adobe.com/enterprise/standards/organizations.html>

Adobe PDF use in analytical information storage and archiving

- http://www.spectroscopyeurope.com/TD_19_5.pdf

PDF for Documents, XML, and Rich Content

- http://www.cendi.gov/presentations/CENDI_2006_PDF_workshop_Chase.pdf

PDF as the standard

- MISMO, PISCES, PRIA,
- ACORD, ORIGO -Insurance standards
- XBRL -Financial reporting
- Government –US Courts, NARA, FDA, US Customs, UN/CEFACT
- UBL, OAGIS, UN eDocs-ebXMLCCTS-based b2b standards
- RosettaNet-Manufacturing
- PDF 1.7 will be released to AIIM for ISO submission (Announced Jan 29, 2007)

Adobe PDF in Security

Adobe PDF Security

- Understanding and Using Security Features with Adobe Reader and Adobe Acrobat
<http://www.adobe.com/products/pdfs/AdobePDFSecurityGuide-c.pdf>

Adobe® PDF for electronic records

- Digital signatures and PDF combine for definitive electronic records and transactions
http://www.adobe.com/government/pdfs/pdf_electronic_records_wp.pdf

Secure Electronic Documents Drive Efficient Online Business Processes

- Adobe document security and control services help organizations protect mission-critical information
http://www.adobe.com/products/server/pdfs/95003796_security_solbr_ue2.pdf

Digital signatures -- Improve document authenticity and integrity

- With powerful encryption technology and public key infrastructure (PKI) support, Adobe digital signature solutions enable enterprises to exchange documents electronically with:
 - Assurance that the information has not been altered since it was sent
 - Verification of the signer's digital identity
- <http://www.adobe.com/security/digsig.html>



Adobe PDF has been approved by the US Department of Defense

(Adobe PDF 產品經美國國防部認證為合法電子簽章及加密應用)

- The United States Department of Defense -- Joint Interoperability Test Command (JITC)
<http://jitc.fhu.disa.mil/index.html>
- Adobe Acrobat 8.0 is CERTIFIED for Document Signing & Encrypting

http://jitc.fhu.disa.mil/pki/vendor/adobe_acrobat_8_0_pro.html

- Adobe Reader 8.0 is CERTIFIED for Document Signing & Encrypting
http://jitc.fhu.disa.mil/pki/vendor/adobe_reader_8.html
- Adobe Acrobat 7.0 is CERTIFIED for Document Signing & Encrypting
http://jitc.fhu.disa.mil/pki/vendor/adobe_acrobat_7_0_pro.html
- Adobe Reader 7.0 is CERTIFIED for Document Signing & Encrypting
http://jitc.fhu.disa.mil/pki/vendor/adobe_reader_7.html



Adobe Digital Signature Solutions Certified by SAFE-BioPharma Association
(Adobe 電子簽章方案經國際醫藥組織所認證)

- Signatures and Authentication for Everyone (SAFE)
- <http://www.adobe.com/aboutadobe/pressroom/pressreleases/200702/020607SAFE.html>
- <http://www.adobe.com/lifesciences/safe.html>

eID cards: Improving trust and reducing the cost of e-government transactions

- http://www.adobe.com/government/pdfs/eid_cards_wp.pdf

FIPS 140 Validation Certificates for Acrobat, Reader, and LiveCycle

- Version 8.1 of Adobe Acrobat and Adobe Reader include the RSA BSAFE Crypto-C ME 2.1 encryption module with FIPS 140-2 validation certificate #828.
<http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/140val-all.htm>

Certified Document to prevent phishing and document forgery

- http://www.adobe.com/security/partners_cds.html

Sample Signatures File

- <http://www.adobe.com/security/pdfs/samplesignatures.pdf>

Adobe PDF in Finance

Adobe committed to financial services standards

<http://www.adobe.com/financial/standards.html>

- [MISMO and PRIA](#): Adobe supports MISMO and PRIA data standards for mortgage processing and for eSigning.
- [PISCES \(mortgage - UK\)](#): PISCES is charged with developing standards for the real estate industry in the UK, and Adobe has helped develop a proof of concept demonstrating PDF-based support of PISCES commercial lending standards.
- [ACORD \(insurance\)](#): Find out how Adobe solutions support ACORD forms for paperless processing.
- [XBRL \(financial reporting\)](#): Adobe and CoreFiling are making it easier to file using XBRL, as this white paper illustrates.
- [MiFID \(EU trade of equities and derivatives\)](#): The new EU Directive MiFID (Markets in Financial Instruments Directive) will drive the trade of equities and derivatives. Electronic documentation is key to comply with this new regulation. This white paper and the MiFID solutions brief illustrate how PDF can provide support to investment banks and trade firms who need to comply with this directive.
- [Electronic signatures and PDF](#): Learn how eSigned PDFs can help support secure and authenticated digital transactions.
- [Archiving - PDF/A](#): An ISO standard for electronic document archiving, PDF/A was developed by a working group that included Adobe and numerous other participants in government and industry. It is a key component in ensuring document retention compliance. [Learn more](#) about how Adobe is participating in the development of archiving standards and read the [PDF/A white paper](#).



New PDF eSignature Guidelines for Mortgages

- "PDF is already widely used in the mortgage industry," said Gabe Minton, executive vice president of MISMO. "These guidelines provide a standardized approach which will help make e-signed PDF documents consistent and interoperable, as well as reproducible over the many years that mortgage documents must exist."
- MISMO, a not-for-profit subsidiary of the Mortgage Bankers Association (MBA),

develops data transfer protocols that span the \$12 trillion residential and commercial real estate finance industry.

- <http://www.adobe.com/aboutadobe/pressroom/pressreleases/200703/032607MISMO.html>



Adobe and Wolters Kluwer Financial Services Team to Deliver Mortgages Electronically

- "Partnering with Adobe enables us to give lenders access to trusted compliance content, based on legislative and regulatory requirements from all 51 U.S. jurisdictions, in PDF," said John Bryant, executive vice president of Banking and Mortgage for Wolters Kluwer Financial Services. "Lenders now have even more flexibility in selecting the tools that work best for their businesses."
- Wolters Kluwer Financial Services help financial organizations manage risk and improve efficiency and effectiveness across their enterprise. The organization's prominent brands include Bankers Systems, VMP® Mortgage Solutions, PCi, GainsKeeper®, CCH® Capital Changes, NILS INSource®, AuthenticWeb™, CCH Wall Street and GulfPak. Wolters Kluwer Financial Services' solutions
- <http://www.adobe.com/aboutadobe/pressroom/pressreleases/200703/032607WoltersKluwer.html>

InfoCamere

- Adobe® Intelligent Document Platform transforms Italian businesses' financial statements into intelligent, electronic documents
<http://www.adobe.com/enterprise/pdfs/infocamere.pdf>

Enabling the Paperless Bank

- One of the Nation's Top 5 Banks utilizes CIC's eSignature Software and Adobe® LiveCycle® Technology to save millions of dollars and sell more products
http://cic.com/customers/success/pdf/CIC_BankCaseStudy0307TSFinal.pdf

PDF and XBRL: Case Studies in Intelligent Financial Reporting

- <http://www.xbrl.org/us/us/SanJose200601/Chase.pdf>

Adobe PDF in Government



US Government Printing Office Deploys Digital Signatures for FY2009 Budget
(美國 2009 度預算書將採用電子簽章的 PDF 格式)

- Washington, DC — In an effort to save taxpayer dollars and reduce unnecessary paper copies, I am pleased to announce the White House will release an E-Budget on Monday, February 4, 2008.
- The visible digital signatures on online PDF documents serve the same purpose as handwritten signatures or traditional wax seals on printed documents. A digital signature, viewed through the GPO Seal of Authenticity, verifies document integrity and authenticity on GPO online Federal documents, at no cost to the customer.
- See the signed PDF:
<http://www.gpoaccess.gov/usbudget/fy09/pdf/budget/outlook.pdf>
<http://www.gpoaccess.gov/usbudget/fy09/browse.html>
- Reference:
http://www.whitehouse.gov/omb/pubpress/2008/010908_budget.html
<http://www.gpoaccess.gov/usbudget/index.html>



Adobe® solutions for tax and revenue authorities

(美國國稅局自 1998 年以來，採用 Adobe PDF、電子簽章、Adobe RIA 做為稅務申報應用)

- Over 1.5 billion PDF files have been downloaded from the United States Internal Revenue Service (IRS) website (www.irs.gov) since the IRS began posting them in 1998.
- Reference:
http://www.adobe.com/government/pdfs/95009255_taxrevenue_sb_UE.pdf

Government use of PDF

- <http://www.egovonline.net/egovindia/egov%20India%202006%20presentations%5>

Government Use of PDF		
Mandated	DeFacto	Accepted
Victoria Archives—Australia	Labor Court, National Press, Education Ministry —Brazil	BfARM (Drug)—Germany
Natl Telecom—Brazil	Labor Dept—Hong Kong	Govt Archiving—Italy
Ministry of Finance, Elec Committee, Ministry of Justice, Italian Bank Association—Italy	National Central Library—Taiwan	Internal Comm—European Union
National Archives—Netherlands	Postal Service—Italy	HMRC, Inland Revenue—UK
Prime Minister/Direction des Journaux Officiels, Ministry of Defence/DGA/ International Affaires—France	Ministry of Finance/ Insee, TracFin, Nuclear Industry (CEA)—France	Ministry of Defence, MoEquipment/ DAEI, DGUHC, Ministry of Foreign Affairs/ AEFE, La Poste, RATP, SNCF, Social Sector—France
Federal Ministry of Interior, Federal Ministry Bundessortenamt (Consumer Protection, Food & Agriculture), Federal Police (BKA) - Germany	Ministry of Equipement/ Sonactra, Ministry of Finance/ ADAE, Ministry of Health, AFNOR - France	Ministry of Finance/DGI, EDG GDF/GDMI (nuclear sites) - France
RDEC, Executive Yuan - Taiwan	Federal Strategy unit for IT - Switzerland	Belastingdienst - Netherlands
CPA, Executive Yuan - Taiwan	National Archives - Norway	Drug Submissions—ICH (WW)
Ministry of Justice, Ministry of Finance, Japan Standards Assn—Japan		National Archives - Sweden
Govt Information Dissemination-UK		Electronic Documents Initiative (eDay) - Denmark
Admin of US Courts, FDA, Library of Congress, Dept of Commerce, State of Florida Archives, Army Corps of Engineers—USA		OGCIO, Customs and Excise, Buildings Department, Census & Statistics Department, Hong Kong Judiciary—Hong Kong
		Ministries of Health, Labor, Education, Land—Japan
		Research and Development Office—Taiwan
		National Archives & Records Administration (NARA), PTO, IRS, NSF, Office of Govt Ethics—USA

PDF
 PDF/A



eSignature for eGovernment

<http://ec.europa.eu/idabc/en/chapter/6000>

(世界各國政府一致採用 Adobe PDF 作為長期保存及電子簽章應用)

Austria

- The eTendering pilot 2004 tested two formats to create qualified signatures: Signed PDF using a plug-in to Acrobat and XML forms using a Web-interface.
- The Austrian Federal Railway (ÖBB) uses signed PDF with a plugin to Acrobat for signed submissions of offers.

Belgium

- Upon obtaining his smart card, the notary can electronically sign PDF documents in the client software application (dubbed 'Digidoc') with his private key. Qualified certificates are provided by the Dutch CA Getronics PinkRocade. After clicking the "Sign" button, the software will sign the PDF-file using the smart card and qualified certificate. This signature is then formatted in a Digidoc container (XaDeS), which also contains the PDF file itself and a signed reply from an OCSP server confirming the validity of the signature at the time of signing.
- Following this procedure, the requester party fills out the necessary administrative information (in the case of a birth certificate: whose certificate is he requesting, and for what purpose), and specifies if he would like to receive a paper certificate, or a .pdf-document that was electronically signed by the issuing public official.
- Generic Adobe PDF Writer, which includes functionality for the Belgian e-ID card's signing features.

Bulgaria

- The system automatically calculates tax bases from different recourses and enables the user to download the declaration before its submission in PDF format. The declaration has to be signed before its submission.
- The application processes text data encapsuled in PDF format. The files attached should be in P7S format.

Czech Republic

- It is possible to use signed XML forms or signed PDF and than to send it to Companies Register. Forms are published on web site of Ministry of Justice.
- Adobe Reader and electronic sending with advanced eSignature based on qualified certificate.

Denmark

- When a user signs the data supplied to an e-form, the signed data is submitted together with an XML instance and a PDF version of the form. Authorities can now retrieve this data on Virk.dk using a common web service.
- The software requirements on the client side for the use of eSignature:
Any browser and currently Adobe Acrobat.
- The signature/certificate presented to the application:
Adobe Acrobat

Germany

- Data structures employed are PDF (for award forms), GAEB, proprietary XML structures as well as the so-called e-sender module.
- In addition to a standard PC there is an additional requirement for Adobe Acrobat Reader 7 as well as an eVergabe-specific signature application plug-in for the reader (JSign).

Ireland

- The software requirements on the client side for the use of eSignature: MS Windows 98/NT/2000/XP or Mac OS 9 or OS X. Standards compliant internet browser. Java virtual machine for handling digital certificates. Adobe Acrobat and functioning email account.

Italy

- A PDF digitally signed file created at the end of the data entry is downloadable by users. They can upload the same PDF file containing the information previously submitted through online web forms after having it digitally signed either by the data controller's legal representative or by an intermediary.
- The data formats used for documents are basically pdf. For exchanging information in A2A applications XML SOAP format is used.
- Procedural Details:
Online submission of information regarding the data processing. Creation of PDF digitally marked with a hash function. Download of the PDF document. Digital signature applied to the PDF document. Upload of the signed document to the web application. No authentication during the procedure except for resuming an interrupted session. Authentication with unique identifier and password.
- The application receives, by upload, a digitally signed PDF file. Then it verifies the digital signature against the content of the PDF file. If verified, and if the certificate is not included in the revocation list, the document is accepted, and a PDF receipt is made available to the online user for download.
- "I think that digital signatures are used in an affordable manner in our online procedure, taking into account the users' perspective and their ability to easily obtain a copy in PDF format of their unsigned notification form as well as a PDF receipt after having successfully uploaded the same document with digital signature."

Luxembourg

- Transmission in the form of PDF file. This manner of proceeding makes it possible to the informant to download the formula of declaration on the screen, to fill the formula, to modify it, save it on computer and to deposit it with the help of the system eTVA.
- Transmission in the form of XML file.
Adobe XDP (XML Data Package): XML-based architecture for creating intelligent electronic documents that leverages the power of PDF for presenting information and XML for processing data.

Portugal

- To date, this group has recommended as follows:
 - digitally signed PDF e-invoice should be sent primarily to end-users, using e-mail
 - UBL mapping (digitally signed according to W3C XMLDigSig) e-invoice should be sent primarily to business customers, using e-mail, ftp(s) or http(s).
- In the private side, Portugal Telecom Group has, by far, the largest e-invoice platform (developed by Multicert). They started using it early in 2005 to send digitally signed e-invoices (in PDF format) by e-mail, in accordance with Decree-Law no. 256/2003. By October 2006, the Portugal Telecom Group had sent over one million e-invoices/month to their end-user customers, greatly reducing costs and reducing the effects on the environment.

Slovakia

- Adobe Acrobat 6.x Standard and higher versions for the filling out and signing of forms and proposals.
- The signature is verified manually with the assistance of electronic signature verification function in Adobe Acrobat.
- Datas are sent to the portal as signed XML documents, subsequently after verification extracted into the XML form, that are automatically processed by application and stored in databank of tax information system. For the forms printing are used PDF documents generated from FDF (form data format).
- The communication between system's server and the users is through the Internet by HTTPS. For the data interaction are beside the HTML pages used also the PDF forms.
- Datas are structured by XML. For data collection purposes and for user's interface creation are the structures converted into the HTML or PDF. The leading formats for the datas collection (proposal's collection) are the forms in PDF format.

Slovenia

- The user signs the data in pdf format, the signed data depend on the form /life event. An Electronic signature proves the identity of the user and assures integrity of filed data.
- All the data are stored in PDF documents and XML forms that are kept in a relational database.
- The entire document in XML format together with its presentation data in PDF format is signed by the user.

Spain

- AEAT develops a program that runs on a local computer of the taxpayer and helps to calculate the data. More than 98% of the taxpayers use it. It delivers a file that can be sent via Internet to the server of the AEAT after eSigning (it is also possible to print it with a PDF-417 code that includes the same file with all the data of the form)
- Data structures processed by the application
 - The data for the declaration arrives as a text data with information in fixed positions. The signature is an PKCS#7. The origin of the sign goes as Base-64. The declaration can be viewed as PDF or HTML by the taxpayer.
 - Data are entered into web forms, extracted and further processed in the application based in Oracle forms. The application involves all the phases included in the process the aid is conceded (admission, evaluation, concession and justification of the aid). The expedients can be print and can be exported in PDF format.

United Kingdom

- The software requirements on the client side for the use of eSignature:
Either an appropriate version of Adobe Acrobat that supports digital signing or use of signing utility provided by DTI to members of the scheme
- The use of eSignature have been implemented using standard document signing capabilities (e.g. Adobe Acrobat) and as a result have produced the strength of solution envisaged at the commencement of the project

Adobe solutions for guided benefits enrollment

- http://www.adobe.com/government/pdfs/guided_benefits_enrollment_sb.pdf

Government Faster, Smarter

- http://www.adobe.com/government/pdfs/gov_faster_smarter_report.pdf

Kane County Circuit Court

- <http://www.adobe.com/cfusion/showcase/index.cfm?event=casestudydetail&casestudyid=280322>

Land Title Branch, Province of British Columbia

- http://www.adobe.com/government/pdfs/land_title_branch.pdf

Orange County Planning and Development Services Department

- County populates building permit–related forms on-the-fly and signs them digitally with Adobe Acrobat, Java libraries, and CIC Sign-It for Adobe Acrobat
http://www.adobe.com/epaper/spotlights/countygovt/pdfs/orange_county_cs.pdf

Highway engineers leverage digital approval processes using Adobe® Acrobat® software

- Chartered by the Spanish Ministry of Public Works, the Association of Highway, Canal, and Port Engineers, known as the Colegio de Ingenieros de Caminos, Canales, y Puertos (CICCP), is the official civil engineering organization of certified engineers working throughout Spain.
http://www.adobe.com/products/acrobat/pdfs/spain_caminos_cs.pdf



Tribunale di Cremona -- an efficient unit of the Italian legal system

- http://www.adobe.com/cfusion/showcase/index.cfm?event=casestudydetail&casestudyid=377905&loc=en_us

Legal regarding use of eSignature

Argentina

- Ley N° 25.506 (B.O. 14/12/2001).
<http://infoleg.mecon.gov.ar/infolegInternet/anexos/70000-74999/70749/norma.htm>
- Decreto N° 2628/02 (B.O. 20/12/2002).
<http://infoleg.mecon.gov.ar/infolegInternet/anexos/80000-84999/80733/norma.htm>
- Decreto N° 724/06 (B.O. 13/06/06).
<http://infoleg.mecon.gov.ar/infolegInternet/anexos/115000-119999/116998/norma.htm>

Austria

- Signature Law, 2000
<http://www.signatur.rtr.at/en/legal/sigv.html>

Belgium

- Signature Law, 2001
http://mineco.fgov.be/information_society/e-signatures/law_e_signature_002.pdf

Brazil

- Medida provisória 2.200-2 (Portuguese)
https://www.planalto.gov.br/ccivil_03/MPV/Antigas_2001/2200-2.htm

China

- Electronic Signature Law of the People's Republic of China (Chinese)
The stated purposes include standardizing the conduct of electronic signatures, confirming the legal validity of electronic signatures and safeguarding the legal interests of parties involved in such matters.

Law of the People's Republic of China on Electronic Signatures,

<http://www.chinaitlaw.org/?p1=print&p2=050611174613>

Effective Date: 2005-03-31

Chinese Version - 中华人民共和国电子签名法

<http://www.chinaitlaw.org/?p1=print&p2=050115230450>

Effective Date: 2005-03-31

Czech Republic

- Act on Electronic Signature No. 227/2000 Coll. (29 June 2000)

England, Scotland and Wales

- Electronic Communications Act, 2000
http://www.opsi.gov.uk/acts/acts2000/ukpga_20000007_en_1#7

European Union and the European Economic Area

European Union Directive establishing the framework for electronic signatures:

- Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures.
http://europa.eu/eur-lex/pri/en/oj/dat/2000/l_013/l_01320000119en00120020.pdf
- Commission Decision 2003/511/EC adopting three CEN Workshop Agreements as technical standards presumed to be in accordance with the Directive
- Implementing laws: Several countries have already implemented the Directive 1999/93/EC.
http://europa.eu/eur-lex/pri/en/oj/dat/2003/l_175/l_17520030715en00450046.pdf

Estonia

- Digital Signature Law, 2000 (in Estonian).
<https://www.riigiteataja.ee/ert/act.jsp?id=694375>
- Digital Signatures Act (consolidated text Dec 2003)
<http://www.legaltext.ee/et/andmebaas/paraframe.asp?loc=text&lk=et&sk=en&dok=X30081K4.htm&query=digitaalalkirja&tyyp=X&ptyyp=RT&pg=1&fr=no>

Finland

- Laki sähköisistä allekirjoituksista, 2003 (in Finnish)
<http://www.finlex.fi/fi/laki/ajantasa/2003/20030014>
- Act on Electronic Signatures, 2003 (in English)
<http://www.finlex.fi/en/laki/kaannokset/2003/en20030014.pdf>

Germany

- German Signature Law of 2001, changed in 2005 (in German)
http://bundesrecht.juris.de/sigg_2001/index.html

Greece

- Presidential Decree 150/2001 (in Greek)
http://www.ekt.gr/content/img/product/14911/pd150_2001.pdf

Hong Kong

- Electronic Transactions Ordinance (Chapter 553)
<http://www.ogcio.gov.hk/textonly/eng/eto/eeto.htm>
 - Gazette Notice published on 29 February 2008
<http://www.ogcio.gov.hk/eng/eto/download/egn200812091265.pdf>
- 《電子交易條例》(第 553 章)
<http://www.ogcio.gov.hk/textonly/chi/eto/ceto.htm>
 - 《電子交易條例》(第 553 章) 公告 (2008 年 2 月 29 日)
<http://www.ogcio.gov.hk/chi/eto/download/cgn200812091265.pdf>

India

- Information Technology Act, 2000
<http://www.legalserviceindia.com/cyber/itact.html>

Ireland, Republic of

- Irish Electronic Commerce Act, 2000
<https://www.post.trust.ie/reposit/ecommerce.html>

Italy

- Decreto legislativo 7/3/2005, n. 82 (Codice dell'Amministrazione Digitale)
http://www.cnipa.gov.it/site/_files/Codice%20Amministrazione%20Digitale_02.pdf

Japan

- Law Concerning Electronic Signatures and Certification Services, 2000 (in Japanese)
<http://www.meti.go.jp/policy/netsecurity/digitalsign-law.htm>
- Law Concerning Electronic Signatures and Certification Services, 2000 (unofficial English translation)
http://www.japanpkiforum.jp/shiryousankou/JP_esignlaw_E.pdf

Lithuania

- Law on electronic signature, 2002
http://www3.lrs.lt/pls/inter2/dokpaieska.showdoc_l?p_id=204802

Luxembourg

- Loi du 14 août 2000 relative au commerce électronique, 2000 (in French)
http://www.legilux.public.lu/leg/textescoordonnes/recueils/COMMERCE_ELECTRONIQUE/SIGNATURE_ELECTRONIQUE.pdf

Malaysia

- Digital Signature Act (Act 562), 1997 (in Bahasa Malaysia).
http://www.skmm.gov.my/the_law/Akta%20562/ak0562.htm
- Digital Signature Act (Act 562), 1997 (in English).
http://www.skmm.gov.my/the_law/Act%20562/a0562.htm
- Digital Signature Regulations (P.U.(A) 359), 1998 (in Bahasa Malaysia).
http://www.skmm.gov.my/the_law/NewAct/Act%20562/Rules%20&%20Regulations/pua%20359y1998/pua359y1998bm/puabm0359y1998.htm
- Digital Signature Regulations (P.U.(A) 359), 1998 (in English).
http://www.skmm.gov.my/the_law/ViewLaw.asp?cc=75708200&lg=e<rid=2&lrid=62588

Malta

- Maltese Electronic Commerce Act 2001, last amended 2005
http://docs.justice.gov.mt/lom/legislation/english/leg/vol_13/chapt426.pdf

New Zealand

- Electronic Transactions Act 2002, sections 22-24
For an overview of the New Zealand law refer: - The Laws of New Zealand, Electronic Transactions, paras 16-18; or - Commercial Law, paras 8A.7.1-8A.7.4.
(these sources are available on the LexisNexis subscription-only website)
http://www.med.govt.nz/templates/ContentTopicSummary___9829.aspx

Norway

- Electronic Signature Act, 2001 (in Norwegian).
<http://www.lovdata.no/all/hl-20010615-081.html>

Peru

- LEY No. 27269. Ley de Firmas y Certificados Digitales
<http://www2.congreso.gob.pe/ccd/leyes/cronos/2000/ley27269.htm>

Romania

- Legea semnăturii electronice, 455/2001 (Romanian)
<http://www.legi-internet.ro/lgsemel.htm>
- Law on the Electronic Signature, 455/2001 (unofficial translation) **(English)**
<http://www.legi-internet.ro/en/e-sign.htm>

Russian Federation

- Federal Law of Russian Federation about Electronic Digital Signature (10.01.2002)
http://www.rg.ru/oficial/doc/federal_zak/1-fz.shtm

Slovenia

- Electronic Business and Electronic Signature Act (in Slovene) .
http://www2.gov.si/zak/Zak_vel.nsf/4c1d8c547755fffac1256616002dd5e1/c12563a400338836c12568fd00505349?OpenDocument

Spain

- Ley 59/2003 , de 19 de diciembre, de firma electrónica (in Spanish).
http://www.fomento.es/MFOM/LANG_EN/OFICINA_VIRTUAL/REGISTRO_TELEMATICO/NORMATIVA/15LEY59_2003-pdf.htm

Sweden

- Qualified Electronic Signatures Act (SFS 2000:832) (in Swedish).
<http://www.riksdagen.se/webbnav/index.aspx?nid=3911&bet=2000:832>

Switzerland

- Federal Law on Certification Services Concerning the Electronic Signature, 2003
http://www.admin.ch/ch/f/rs/c943_03.html

Turkey

- Electronic Signature Law

<http://www.kamusm.gov.tr/tr/Bilgideposu/Mevzuat/kanun.jsp>

Turkey has an Electronic Signature Law since 2004. This law is stated in European Union Directive 1999/93/EC. Turkey has a Government Certificate Authority - Kamu SM for all government agents for their internal use and three independent certificate authorities all of which are issuing qualified digital signatures.

- Kamu Sertifikasyon Merkezi (Governmental Certificate Authority)
<http://www.kamusm.gov.tr/> (Turkish)
- E-Güven (owned by Turkish Informatics Foundation)
<http://www.e-guven.com/> (Turkish)
- Turktrust (owned by Turkish Military Force Solidarity Foundation)
<http://www.turktrust.com.tr> (Turkish)
- E-Tugra
<http://www.e-tugra.com> (Turkish)

Turkey had a recent triumph in digital signatures and become the forerunner of mobile signature, that is, qualified signatures that are created using mobile phones. The leading GSM operator of Turkey, Turkcell, had developed the business model of this service for consumers first in the world.

http://www.turkcell.com.tr/index/0,1028,400004,00.html?banner=dig_20022007_turkcellmobilimza

United Nations Commission on International Trade Law

- UNCITRAL Model Law on Electronic Signatures (2001), a strong influence in the field.

http://www.uncitral.org/uncitral/en/uncitral_texts/electronic_commerce/2001Model_signatures.html

United States

- Uniform Electronic Transactions Act (UETA)
<http://www.law.upenn.edu/bll/archives/ulc/fnact99/1990s/ueta99.htm>
- Electronic Signatures in Global and National Commerce Act (E-SIGN)
<http://www.ftc.gov/os/2001/06/esign7.htm>

Uruguay

Uruguay laws include both, electronic and digital signatures:

- Concerning passwords or adequate information technology gestures
<http://www.parlamento.gub.uy/leyes/AccesoTextoLey.asp?Ley=16736&Anchor=#art695>
- Concerning electronic and digital signature and PKI
<http://www.parlamento.gub.uy/leyes/AccesoTextoLey.asp?Ley=17243&Anchor=#art25>

Legal cases related to e-Signature

Court decisions discussing the effect and validity of digital signatures or digital signature-related legislation:

- *In re Piranha, Inc.*, 2003 WL 21468504 (N.D. Tex) (UETA does not preclude a person from contesting that he executed, adopted, or authorized an electronic signature that is purportedly his).
- *Cloud Corp. v. Hasbro*, 314 F.3d 289 (7th Cir., 2002) (E-SIGN does not apply retroactively to contracts formed before it took effect in 2000. Nevertheless, the statute of frauds was satisfied by the text of E-mail plus an (apparently) written notation.)
<http://www.emlf.org/Resources/cloud.pdf>
- *Sea-Land Service, Inc. v. Lozen International*, 285 F.3d 808 (9th Cir., 2002) (Internal corporate E-mail with signature block, forwarded to a third party by another employee, was admissible over hearsay objection as a party-admission, where the statement was apparently within the scope of the author's and forwarder's employment.)
<http://www.admiraltylawguide.com/circt/9thsealandlozen.pdf>