

Legislation

■ Canada

The Secure Electronic Signature Regulations, issued under the *Personal Information Protection and Electronic Documents Act 2000* and *Canada Evidence Act 2000*, were passed the Governor in Council in February 2005.

Reference: P.C. 2005-57 February 1, 2005; Canada Gazette Volume 139, No. 4 — February 23, 2005 Registration SOR/2005-30 February 1, 2005.

For a copy see:

<http://canadagazette.gc.ca/partII/2005/20050223/html/sor30-e.html>

■ China

The administrative measure on electronic certification service was passed on 28 January 2005 by the Ministry of Information Industry, published on 8 February 2005 as the decree of The Ministry of Information Industry of People's Republic of China, No. 35. The measure entered in force on 1 April 2005.

For more information, see:

<http://www.mii.gov.cn/mii/zcfg/bl35.htm>

An electronic document and electronic signature Bill was admitted by the President of the Legislative Assembly of the Macao Special Administrative Region on 17 May 2005. The Bill passed in a general discussion on 25 May 2005. The Bill has now been assigned to a working committee for a detailed study.

The Bill is available in Chinese and Portuguese at:

<http://www.al.gov.mo>

Information provided by Minyan Wang, China correspondent.

■ Germany

The German Signature Law and the Ordinance on Electronic Signatures have been amended by the 1. *Signaturänderungsgesetz* (BGBL. Teil I v. 10.1.2005, p. 2-3), which entered into force on 11 January 2005. This eases the requirements for certification-service-providers and contains

clarifying modifications. On 1 April 2005 the *Justizkommunikationsgesetz* entered into force (BGBL. Teil I of 29.3.2005, p. 837-858). The law contains modifications of form requirements in respect of the German procedural code (ZPO). After previous amendments have been made to the German contract and procedural law as well as of the administrative law, it completes the adjustment of legal requirements for the use of electronic documents by establishing rules for the use of electronic documents in court procedure. At the same time, the evidence rule in the former § 292 a ZPO is replaced by the new § 371 a ZPO which provides for the analogical application of the rules on documentary evidence to electronic documents. Further rules concern the transformation of electronic documents to paper and vice versa, and the access to electronic records.

For the 1. Signaturänderungsgesetz see: http://www.regtp.de/imperia/md/content/tech_reg_t/di_gisign/202.pdf

For the Justizkommunikationsgesetz see: <http://217.160.60.235/BGBL/bgb11f/bgb1105s0837.pdf>

For a critical overview on this subject by Professor Dr. Alexander Roßnagel, Kassel/Saarbrücken, 'Elektronische Signaturen mit der Bankkarte?' Das Erste Gesetz zur Änderung des Signaturgesetzes, *Der Aufsatz wurde veröffentlicht in: Neue Juristische Wochenschrift*, 58. Jg. (2005), Heft 7, 385 – 388, available in electronic format at:

<http://www.opsi.gov.uk/si/si2004/20043236.htm>
http://www.unikassel.de/fb7/oeff_recht/publikation/en/pubOrdner/2005_njw_58_sigaend.pdf

Information provided by Rotraud Gitter and Daniel Wilke, German correspondents.

■ South Africa

The Minister of Communications expressed an intention make regulations with respect to an Accreditation Authority in 2004, and gave notice, inviting comment on the proposed accreditation regulations drafted in terms of the *Electronic Communications and Transactions Act, 2002* (Act No 25 of 2002).

The draft regulations can be found at:

<http://www.doc.gov.za/images/Draft%20Accreditation%20Regulations1.pdf>

■ United Kingdom

The *Consumer Credit Act 1974* has been amended by Statutory Instrument 2004 No. 3236 'The Consumer Credit Act 1974 (Electronic Communications) Order 2004', under the provisions of sections 8 and 9 of the *Electronic Communications Act 2000*. The provisions of the Statutory Instrument came into force on 31 December 2004. This statutory instrument permits the use of electronic signatures in the formation of consumer credit agreements.

The statutory instrument is available at:
<http://www.opsi.gov.uk/si/si2004/20043236.htm>

■ Vietnam

A draft Law on E-Transactions has been submitted to the National Assembly for debate, and is expected to be passed by its National Assembly at its 8th session by the end of 2005. The latest draft governs the form of transactions to be conducted electronically. The content of an electronic transaction remains subject to other laws, such as the Civil Code and Commercial Law. The latest draft does not cover e-transactions in respect of inheritance, transfer of immovables, commercial papers, etc. In parallel with the drafting of the Law on E-transactions, the government is also intending to issue a number of decrees detailing issues on (i) digital signature and electronic certification; (ii) banking electronic payments; (iii) commercial electronic transactions; (iv) electronic transactions of state agencies and (v) financial electronic transactions.

The latest draft (7th version) which has been submitted to the National Assembly for debate contains 8 chapters and 55 articles:

Chapter 1: General provisions

Chapter 2: Data messages

Chapter 3: Digital signature and electronic certification

Chapter 4: Electronic contract execution and implementation

Chapter 5: E-transactions of state agencies

Chapter 6: Security, safety and confidence in e-transactions

Chapter 7: Inspection, dispute solution and dealing with violations

Chapter 8: Implementation provisions

Apparently the most controversial issues are the

scope of Law on E-transactions, digital signatures, prohibited acts in e-transactions and the state agencies in charge.

A majority of members of the National Assembly consider that a proposed Electronic Transaction Law should be introduced. Such a law will enable Vietnam to comply with the Asia-Pacific Economic Co-operation Forum requirement that transactions should be conducted electronically by 2005 if a member, and by 2010 if a developing member.

News item:

<http://www.vneconomy.com.vn/eng/?param=article&catid=13&id=050602101943>

**Additional information provided by
Nguyen D. Linh of VILAF, Lawyers, Hanoi,
Vietnam (<http://www.vilaf.com>)**

Application of electronic signatures using a name typed on an e-mail

■ United Kingdom

A new E-mail Protocol sets out how parties may communicate by e-mail on a number of matters with the Chancery Division of the High Court of Justice at the Royal Courts of Justice in London. It applies with effect from 18 April 2005. The types of documents which may be sent by e-mail are skeleton arguments, chronologies, reading lists, lists of issues, lists of authorities (but not the authorities themselves) and lists of the persons involved in the facts of the case sent in advance of a hearing.

The E-Mail Protocol itself will need to be included on the Court Service website on the 'Court User Email Guidance' page, which is at:

<http://www.courtservice.gov.uk/usinQcourts/emailGuidance/Quidance-index.htm>

The relevant e-mail addresses will need to be included on the Court Service website on the list of Courts accepting e-mail communications, which is at:

<http://www.courtservice.gov.uk/usinQcourts/emailGuidance/courts.htm>

Digital signatures

Technology

■ Latvia

In April 2005 the government of Latvia began consultations with potential certification service providers with a view to implement secure electronic signatures.

The report 'Informat Vais Zi Ojums Pak Elektronisk Paraksta Ievie Anaa Gaitu' prepared by the Secretariat of Minister for Special Assignments for Electronic Government Affairs for the Government, is available at: <http://www.mk.gov.lv/mk/20629/31129.doc>

The Secretariat of the Minister for Special Assignments for Electronic Government Affairs is available at: <http://www.eps.gov.lv/>

■ Lithuania

The Information Society Development Committee undertook a project to introduce electronic document exchange in the public sector. The process of tendering resulted in the choice of a product E-Lock ProSigner by Frontier Technologies Corporation. The first phase began in 2003 when the Government Chancellery, the Transport Ministry, the Economics Ministry, the Department of Archives and the Information Society Development Committee began to test a pilot project.

For further information, see: <http://www.onlinepressreleases.com/onlinepr/150lst/112531.shtml>

Public Notary

■ North Carolina

The Legislature of North Carolina is rewriting Chapter 10A of the *Notary Public Act* and adopting the *Uniform Real Property Electronic Recording Act*. The review will affect all documents that require a notary acknowledgment, jurat, the verification, proof or the taking of an oath. This will affect every area of practice.

The first version of the proposed Bill (934) is available at: <http://www.ncleg.net/Sessions/2005/Bills/Senate/HTML/S934v1.html>
More information is available at: <http://www.ncbar.org/governmentalAffairs/newsPublications/RPElectronicRecord.pdf>

Real property

North Carolina has introduced a draft Bill entitled Real Property Electronic Recording, Senate Bill H762. It provides for the use of electronic records and signatures in relation to the transfer of real property, and includes the formation of the Electronic Recording Council.

Further details can be found at: <http://www.ncleg.net/gascrpts/BillLookup/BillLookup.pl?Session=2005&BillID=s671>

Electronic procurement in the European Union

The eEurope Action Plan¹ has requested the Council and the European Parliament to adopt the proposed legislation relating to the procurement Directives. The Action Plan sets out the agenda to encourage the development of the general procurement environment, and it encourages Member States to automate steps in all phases of the procurement cycle.

More information available at: <http://europa.eu.int/idabc/en/document/3821/254>, http://europa.eu.int/publicprocurement/index_en.htm and http://europa.eu.int/comm/internal_market/publicprocurement/e-procurement_en.htm

Information provided by Dr Patrick Van Eecke, European Union correspondent

Electronic health cards

■ Italy

Legal background to the Italian electronic health card can be found at: http://www.agenziaentrate.it/tessera_sanitaria/

■ Germany

The German Federal Government announced details of the eCard on 9 March 2005. In the future, the registration card and health insurance card might be combined into a single document. The aim is to provide a common strategic

framework in relation to the identification of holders of the card, and the provision of social security and health insurance information. It is claimed that such a multi-purpose card will increase efficiency and produce cost savings. A set of detailed specifications for the technical architecture was proposed on 14 March 2005. The Federal Data Protection Commissioner expressed concerns about how the eCard will be used, and suggested that its use should not be mandatory.

Press release by the German government:
<http://www.bundesregierung.de/Nachrichten/Artikel-434.799497/artikel/eCard-Strategie-der-Bundesregi.htm>
Press release by the Federal Data Protection Commissioner: <http://www.datenschutz.bund.de/Presse/pm20050314a.html>

Electronic prescriptions

■ Sweden

Apparently 45 per cent of all prescriptions are now sent electronically in Sweden. The figures were 9 per cent in September 2001 and 32 per cent in September 2004. In a survey conducted with 1,568 people in association with Stockholm County Council and Apoteket, 95 per cent said they wanted to use the service again.

Swedish state-owned pharmacy:
<http://www.apoteket.se/>
e-recept Stockholm:
http://www.ereceptstockholm.se/imcms/servlet/GetDoc?meta_id=1011

Electronic voting

■ Estonia

Residents of Tallinn, the capital of Estonia will be able to vote from any personal computer connected to the internet during the next local elections during the autumn of 2005. Voters will need an electronic registration card, a card reader, and access to the internet.

A report by the National Election Committee 'General Description of the E-Voting System' (Tallinn, 2004) is

available at:
<http://www.vvk.ee/elektr/docs/Yldkirjeldus-eng.pdf>
Estonian National Electoral Committee web site:
<http://www.vvk.ee/elektr/index.html>

■ Ireland

The e-voting project is estimated to have cost in the region of 52 million euros to date. Apparently, maintaining and storing the 6,200 e-voting machines that have been purchased to date costs nearly 1 million euros each year. It was intended to hold the first exclusive electronic voting exercise in June 2004 for the local and European elections. However, by April 2004 the Government decided not to use the e-voting machines further to the release of an interim report by the Independent Commission on Electronic Voting and Counting. The Commission refused to recommend the use of the system because of issues about secrecy, accuracy and testing. The Commission also pointed out that a full assessment could not be performed the full source code of the machines had not been received.

Article by Richard Oakley 'E-voting study costs spiral' 6 February, 2005 at:
<http://www.timesonline.co.uk/article/0,,2091-1472470,00.html>
For reports by the Independent Commission on Electronic Voting and Counting, see:
<http://www.cev.ie/>
For more information about electronic voting, see:
<http://www.electiononline.org/>

■ Netherlands

In early 2004, 2.2 million people elected the boards of the waterschappen (public water management authorities) of Rijnland and Dommel by a mixture of internet voting and post. A total of 403,279 votes were cast for the two elections, of which 280,848 (70 per cent) were received by postal mail and 122,431 (30 per cent) were sent by way of the Rijnland Internet Election System.

A symmetrical cryptographic algorithm is used, instead of a public key algorithm. A small script file is automatically downloaded to the users personal computer they enter the relevant page on the internet. The script enables the voter to enter a secret code, which is sent by post. The script then converts the voter's choice for a candidate into an anonymous cryptographic vote before the voter receives a confirmation that their vote has been

successfully delivered. The virtual ballot form is the only personal and sensitive part that is transmitted by the voter's browser to the election server.

Press release by Rijnland District Water Control Board:
<http://www.rijnland.net/asp/get.asp?xdl=../views/rinternet/xdl/Page&Posldt=00002713&itmldt=00004507&Sitldt=00000012&Varldt=00000001>

A paper by Engelbert Hubbers, Bart Jacobs and Wolter Pieters 'RIES – Internet Voting in Action' Nijmegen Institute for Computing and Information Sciences is available at:
<http://www.nii.ru.nl/research/reports/full/NIII-R0449.pdf>

■ Spain

During the first week of February (1 to 18 February 2005) about two million voters in 52 Spanish municipalities were able to participate in a pilot voting project by way of the internet. The pilot had no legal status. Reports by the press suggested that only 10,543 of the two million voters that could vote (about 0.54 per cent) tried out the remote internet voting system. Those that voted were able to cast their vote on-line from any computer connected to the internet. Voters were required to use a smart card and a PIN code. The E-Voting Observatory criticized the trail for not having sufficient security measures in place.

The E-Voting Observatory report is available at:
<http://www.votobit.org/archivos/Prueba/Votolnternet2005.pdf>

For details of e-voting projects across Europe, see:
<http://focus.at.org/e-voting/countries>

■ Portugal

Two non-binding pilot electronic voting systems and a remote internet voting solution were tested during the Portuguese legislative elections on 20 February 2004. The aim was to test the use of electronic technologies throughout the voting process, including the identification and authentication of voters to the counting of electronic ballots. Some 150,000 citizens who were registered to vote outside Portugal were sent an access code by post. This code permitted the holder to cast a non-binding vote by way of a secure internet platform made available on a web site (<http://www.votoelectronico.pt>) dedicated for the purpose.

See the dedicated web site in relation to electronic voting: <http://www.votoelectronico.pt/>

Press release available at:

http://www.unic.pcm.gov.pt/UMIC/Media/Saladelmprensa/evoto_legislativas2005.htm and
http://www.unisys.pt/about_unisys/news_events/pr_evoting2_160205.htm

■ United States of America

A statistical analysis conducted by the University of California suggested that electronic voting machines in Florida might have given George Bush up to 260,000 more votes than he should have received.

More information is available at:

<http://ucdata.berkeley.edu:7101/>

Mobile payments

Mobile car parking payment system

A series of experiments have been made in Germany to provide to mobile parking and the provision of mobile tickets. In February 2005, a trial involving mobile parking was conducted in Berlin, in the districts of Mitte, Charlottenburg-Wilmersdorf and Tempelhof-Schöneberg. To use the system, the user registers their mobile telephone number, car registration number and bank details on a dedicated web site (<http://www.handy-parken.de/>). Once the user has completed the registration process, they receive an individual permit by post. This permit must be placed on the inside of the vehicle's windscreen. Parking payment is processed at the end of the month by direct debit to the user's bank account.

The user makes a payment calling a toll-free number on their mobile telephone. The vehicle can remain parked for as long as required, because the user is charged by the minute. Once they leave the parking space, drivers are required to ring another toll-free number. Each time they make a call, starting and ending their parking, the user received a telephone call to confirm their instructions. A user can initiate the process by using the text messaging system on their mobile telephone.

Traffic wardens ensure the vehicle is permitted to use the system by capturing the vehicle's permit

details with a camera mobile telephone. The data is then encoded and transmitted via GPRS to a data center. The inspector then receives confirmation as to whether the user has initiated their parking permit.

Mobile ticket system

Users of public transport will have the opportunity of obtaining a smart card with an embedded radio frequency identification microchip. They will be able to make payments without physically producing the card to a reader. Apparently, the card will contain information regarding the identity of the purported holder, as well as the degree to which they are entitled to use public transport. All data will be encrypted for secure transmission. Passengers will receive a consolidated monthly invoice.

Systems that are connected to the card readers automatically calculate the price of the fare from the data transmitted by the reader. The system is also designed to determine the public transport operator with whom the card owner is registered, which will issue the consolidated invoice.

A press release by Siemens is available at:
http://www.siemens.com/index.jsp?sdc_p=t2cz3su2o1242939pflmi1239035&sdc_sid=4496942289&sdc_bcpath=256461.s_0,&&sdc_sectionid=5&sdc_flags=0

A press release by T-systems is available at:
<http://www.t-systems.com/coremedia/generator/www.t-systems.com/en/t-systems.com/Press/. HomePos=1/id=99780.html>

A similar system is being considered in Ireland:
<http://www.transport.ie/viewitem.asp?id=6504&lang=ENG&loc=1850>

See also the Octopus card, available in Hong Kong:

<http://www.octopuscards.com>

and the Oyster card, available in London:

<http://www.oystercard.com>

European interoperability framework

The European Interoperability Framework provides a set of guidelines and recommendations to enable interoperability of government systems and processes with a view to delivering pan-European e-Government services.

A copy is available at:

<http://europa.eu.int/idabc/en/document/3820/254>

E-mail

■ Denmark

A secure electronic mailbox in operation since 2001 has become very popular in Denmark. More than 500,000 people now use it. It is mainly used to store bank statements, insurance policies, payslips and official documents from public offices.

The web site is located at: <http://www.e-boks.dk/>
Centre for Digital Government:
<http://www.centerdigitalgov.com/international/story.php?docid=37780>

■ Italy

Registered e-mail is now available by a decree of the President dated 11 February 2005, number 68 *Regolamento recante disposizioni per l'utilizzo della posta elettronica certificata, a norma dell'articolo 27 della legge 16 gennaio 2003, n. 3.* (GU n. 97 del 28-4-2005). This decree gives registered e-mail the same legal status as recorded delivery letters, and provides the legal basis for the certification of emails that have been sent and received. The sender obtains a receipt from its ISP, which constitutes proof that the message and attached documents have been sent. Similarly, when the message is delivered to the addressee, the addressee's ISP sends a receipt to the sender certifying the delivery of the e-mail including the date and time of delivery. No proof is provided as to whether the e-mail has been opened by the recipient. The decree establishes an official register of certified e-mail managers. The register will be maintained and controlled by the National Centre for IT in Public Administration.

Press release by the Italian Council of Ministers:
<http://www.governo.it/Governo/Provvedimenti/dettaglio.asp?d=22051>

Press release Department for Innovation and Technology:

http://www.innovazione.gov.it/ita/comunicati/2004_03_25.shtml

The Gazette is available at:

http://www.gazzettaufficiale.it/guri/sommario?service=0&numgu=97&data_gu=28.04.2005&expensive=0&supplemento=null

(Please note, this is available on-line for 60 days from the publication of the Gazette, after which payment is required.)

The Decree is available at:

<http://www.civile.it/ilaw/visual.asp?num=1635>

For further details see:

[http://www.cnipa.gov.it/site/it-IT/In_primo_piano/Posta_Elettronica_Certificata_\(PEC\)/#pec](http://www.cnipa.gov.it/site/it-IT/In_primo_piano/Posta_Elettronica_Certificata_(PEC)/#pec)

The technical rules for the operation of certified e-mail dated 12 May 2005 are available at:

http://www.cnipa.gov.it/site/_files/Posta%20Elettronica%20Certificata%20-%20Regole%20Tecniche%20%20%5b12-05-05%5d.pdf

The Bill, dated 12 May 2005 about the technical rules of certified e-mail is available at:

http://www.cnipa.gov.it/site/_files/DPCM%20PEC%20%5b12_05_05%5d.pdf

**Additional information by Dr Luigi Martin,
Italian correspondent.**

Registration cards

■ Austria

Maestro bank cards issued in Austria have the ability to include an additional function – that of acting to identify the holder. A digital signature is stored in the microchip, which permits a user to use their Maestro card to identify them on-line. For it to work, the user must have a card reader and a personal computer connected to the internet. The additional function is aimed at nurturing the take-up of e-government services. It is also anticipated that the combined card may encourage the use of digital signatures among businesses and between businesses and consumers.

A press release by Europay Austria is available at:

http://www.europay.at/_C1256D6A004CC687.nsf/ie/0B13D1743E8A49C9C1256F96003E8816?OpenDocument

The Austrian citizen card web site:

<http://www.buergerkarte.at/>

■ Belgium

Belgium appears to be the first country in the world to provide all subjects with an electronic registration card that can also be used to help verify their presence on-line. Apparently the aim is to integrate the technology with MSN Messenger. One idea is to enable children to enter chat rooms using their e-ID card to prevent older people from entering

the chat room. As a result, the government intends to provide all children over the age of 12 with a free card reader in 2005. Various additional features have been developed by both public and private sectors, including on-line tax returns, certified e-mail, the ability to request official documents on-line, internet banking and library services.

Registration card web site: <http://eid.belgium.be/>

■ European Union

A paper 'Towards an electronic ID for the European Citizen' sets out the CEN/ISSS Workshop eAuthentication on the developments, threats and opportunities relating to electronic identification services.

The document is available at:

<http://europa.eu.int/idabc/en/document/3817/254>

See also a 'Survey on EU electronic ID Solutions' available at:

<http://europa.eu.int/idabc/en/document/3813/254>

■ Finland

In Finland the Population Register Centre has concluded a co-operation agreement with TeliaSonera Finland and Radiolinja with the aim of creating a mobile telephone service to identify a person electronically. The service can be used by the public and private sectors, and the aim is to enable it to be used by way of the internet permitting the mobile telephone to act like a card reader.

For more information, see:

<http://www.fineid.fi/default.asp?todo=setlang&lang=uk;>

<http://www.vaestorekisterikeskus.fi/vrk/home.nsf/en/electronicidentity>

■ United States of America

The 109th Congress has passed a new act, the full title which reads: 'To establish and rapidly implement regulations for State driver's license and identification document security standards, to prevent terrorists from abusing the asylum laws of the United States, to unify terrorism-related grounds for inadmissibility and removal, and to ensure expeditious construction of the San Diego border fence.' The short title is REAL ID Act of 2005. This Act establishes uniform standards for state driving licenses in Title II. It will take three years to be effective, but the Act, in effect, creates

a national registration card.

The Act in electronic format is available at:
<http://thomas.loc.gov/cgi-bin/query/C?c109:./temp/~c109vxxwPl1>

Product

SignADoc™ is a product that enables organizations to sign a document on-line. The product has been developed with an emphasis on designing a simple and easy to use web interface.

Users set up their own accounts on-line, and can also create accounts for any person within their organization that may need to use the software. A new transaction is created in a few steps, all on-line:

- The user selects the document they want signed. This can be in any format.
- SignADoc™ automatically converts the file server side into a secure PDF document.
- The user determines how many people are to sign and how they will sign the document (the system supports five methods of signing from a “click here to sign” to a biometric identity verification.)
- The document is displayed and the person determining how the document is to be signed uses a “drag and drop” method to establish where they want each person to sign within the document.
- SignADoc™ ASP allows for up to ten people to sign the document, and 100 signatures per transaction. This allows users to request those signing the document to sign in multiple sections of the document.
- The transaction is processed and all those who sign the document are notified electronically by e-mail.
- There is no software required, and the process is handled and audited by the SignADoc software.

Signatures are appended logically, so users can request a specific sequence in which those signing are to sign the document. Once one person has signed, the next person will be notified until everybody has signed the document successfully. Electronic copies are then sent to all parties, and they can also check the integrity and validity of each signature or the whole document at any time in the future. This is done by clicking on a signature that will in turn send a query to the SignADoc servers to verify and display the audit trail.

For more information and demonstrations please see
<http://www.signadoc.com>

Digital signatures

■ China

The Macao Special Administrative Region has enacted an Electronic Document and Electronic Signature Act, No. 5/2005 Law of 8 August, 2005. It entered into force 30 days after the law was published, on 8 September 2005. The Bill was revised twice, on 30 June 2005 and 6 July 2005. It was finally passed after a detailed discussion on 20 July 2005.

Further information and a copy of the law in Chinese and Portuguese is available from
<http://www.al.gov.mo>

Reported by Minyan Wang, China correspondent.

■ Finland: digital signatures on mobile telephones

The Finnish Population Register Centre will enable people to notify the registrar of a change of address and to check the data held on them in the register by way of a Citizen Certificate-based identification system using a mobile telephone, in co-operation with Elisa, Finland's second-largest mobile network operator.

The Citizen Certificates are included in SIM cards containing a digital signature function and an encryption mechanism, produced by Giesecke & Devrient GmbH. The cards have an integrated security certificate based on Java technology with a memory capacity of 128Kb. Distribution will begin in the autumn of 2005, and will include other mobile network operators in the near future. The mobile operator will work with the Population Register Centre and the Finnish Police to issue the cards, and to manage the authentication of each person.

The Citizen Certificate is an electronic registration card that is intended to be compatible with a number of hardware devices, such as mobile telephones, personal digital assistants, personal computers, digital television, and public web kiosks. It is anticipated that this project will enhance the government's PKI-based electronic identity scheme, established in 1999.

Population Register Centre web site:
<http://www.vaestorekisterikeskus.fi/vrk/home.nsf/maindocumentsEng/electronic+identity?opendocument>

News items:

'Mobile citizen identification gains ground in Finland'
eGovernment News – 28 July 2005:

<http://europa.eu.int/idabc/en/document/4500/5864>

'Cellphones Offering Secure Digital Signatures'

Cellular News 21 July 2005:

<http://www.cellular-news.com/story/13515.php>

■ Hungary: electronic business registration services

Hungarian businesses will be able to use a limited number of procedures as a result of the Act on the registration and publicity of businesses and the Business Court proceedings. This Act permits the Business Court to conduct business electronically from September 2005. The service is to be made available through the electronic services government portal, based on the National Business Registration and Business Information System of the Ministry of Justice.

A company can submit electronic requests for registration and changes to registration, such as changes in the address, branch or field of the activity undertaken by the company. In addition, companies can also request an electronic copy of the documents included in the registry. At present, the service is only available to large companies but it will be extended to all registered companies.

All requests must be validated with a qualified electronic signature of the legal representative of the company. The qualified electronic signature is sent to the business information service of the Ministry of Informatics. The business information service undertakes a check on the authority of the electronic document, and then passes it to the Business Court.

Government portal:
<http://www.magyarorszag.hu/ugyfelkapu/>

■ Lithuania

A project entitled 'Pilot Project of Electronic Signature Implementation in the Public Institutions' is being run by the Information Society Development Committee (IVPK,) and it selected E-Lock ProSigner desktop digital signature software. The aim of the Lithuanian Government was to evaluate solutions to enable secure electronic document exchange within and between public administrations (For more detail see the article 'Legal regulation of electronic signatures in Lithuania').

Electronic Signature Supervision web site:

<http://epp.ivpk.lt/>

Further information is available from:

<http://www.elock.com/products/prosigner/intro.asp>

Certification legislation

■ China

Under the provisions of the Electronic Signature Law and Commercial Cryptogram Administrative Ordinance, the National Cryptogram Administrative Bureau released the 'Electronic Authentication Service Cryptogram Administrative Measure' on 31 March 2005. This was in force on 1 April 2005. The Ordinance consists of 14 Articles. In accordance with the provisions of article 13 of the Measure, the National Cryptogram Administrative Bureau issued the 'Certificate Authentication System Cryptogram and the Relevant Security Technical Criterion' on 23 June 2005.

More information in Chinese is available from:

<http://www.oscca.gov.cn/>

Five Certification Authorities in China obtained a licence to provide electronic certification from the Ministry of Information and Industry on 19 August 2005. They are the first five CAs which have been granted a licence. They are Shandong Digital Certification Administrative Ltd, Yin-Lian Financial Certification Central Ltd, Beijing Tian-Wei-Cheng-Xin Electronic Commerce Service Ltd, Shanxi Digital Certification Central Ltd and Guo-Tou-An-Xin Digital Certification Ltd. (Jilin CA).

Information in Chinese is available from:

http://www.eschina.info/Article_Show.asp?ArticleID=869

Reported by Minyan Wang, China correspondent.

Electronic health cards

■ Denmark

Subjects in Denmark now have the ability to obtain information about their treatment in hospital on-line at no cost. This is achieved through the health portal at sundhed.dk. Patients can read their hospital files from 1977. Treatment received by a patient outside the hospital and psychiatric treatments are available from 1995. The web site includes information about births, accidents, waiting lists and other related information.

A patient must have a digital signature from the National Board of Health to view their records. It seems that some 12,000 people ordered a digital signature when the web site was first available, which caused a temporary breakdown of the server.

Sundhed portal:

http://www.sundhed.dk/wps/portal/_s.155/1836

■ France

A fake Vitale electronic health insurance card, which is not presently encrypted, has been successfully created and used by an IT security professional to demonstrate the security system flaws. Jérôme Crétaux demonstrated the data contained in the chips was easy to copy and load on to another card. His experiment confirmed the findings of another IT professional, Patrick Gueulle, which he wrote about in August 2005.

The card was introduced in 1998, and distributed to individuals personally registered with social security for several members of the same family. In 2001, the card was issued to all individuals over the age of 16 years who are entitled to social security payments. It seems that in May 2004, the former Health Minister Philippe Douste-Blazy accepted that there were 58 million cards in circulation, although those eligible for the card only numbered 48 million. To resolve the problem digital signatures will be added to the card, and new cards will be issued over the next five years.

The authorities have, as usual, acted aggressively. Sesam-Vitale, which operates the health insurance card scheme, is reported to have initiated legal action against both Mr Crétaux and Mr Gueulle. According to press reports, Mr Crétaux has also been interrogated by the ICT

crime unit of the French national police (Office Central de Lutte contre la Criminalité liée aux Technologies de l'Information et de la Communication – OCLCTIC).

More information about the Vitale 2 card:

http://www.sante.gouv.fr/htm/actu/carte_vitale2/present.htm

Problèmes de sécurité de la carte Vitale: suite... mais pas fin! (Security problems of the Vitale Card) article by Patrick Gueulle:

http://www.acbm.com/pirates/num_19/problemes-securite-carte-vitale.html

Electronic voting

■ Estonia

Estonia used the on-line voting system based on Linux in October 2005 to allow people to vote over the internet for mayors and city councils across the country. The plan is to permit voting to take place over the internet in the next parliamentary elections in 2007. Apparently 9,317 people out of 1.06 million registered voters decided to vote over the internet.

To cast a ballot, the person voting had to obtain a special identity card, a device that could read the card, and a computer with access to the internet. To vote, the voter inserted their card into the reader, which in turn was connected to their computer. They then logged on to the voting web site. Once their card was authenticated, the voter was able to cast their ballot by way of an encrypted system. After casting their ballot, they then affixed their digital signature to verify the selections they made before transmitting their vote.

Estonian National Electoral Committee:

http://www.vvk.ee/english/pilot_jan05.html

News items:

Jari Tanner, 'Estonians Use Linux for Groundbreaking Internet Election', 19 October 2005:

<http://www.linuxinsider.com/story/fsnN2yhSGJv0uA/Estonians-Use-Linux-for-Groundbreaking-Internet-Election.xhtml>

Anne Broache 'Estonia pulls off nationwide Net voting', 17 October 2005:

http://news.zdnet.com/2100-9592_22-5898115.html

■ United States of America

A range of problems with voting over the internet will prevent the USA from implementing electronic voting for some time, partly because individual states are implementing different systems.

The most recent report to Congress from the GAO 'Federal efforts to improve security and reliability of electronic voting systems are under way, but key activities need to be completed' September 2005 is available from:

<http://reform.house.gov/UploadedFiles/GAO-05-956.pdf>

Mobile banking

■ South Africa

A joint venture between MTN and Standard Bank was formally launched in August 2005 in South Africa. The concept is described as 'cellphone-centric banking'. A customer obtains a starter pack from an MTN outlet, containing a Mobile Money card, including instructions on downloading the banking software to the mobile telephone. Alternatively, the customer can obtain a SIM card that already has the software loaded during production.

Once the software is loaded into the SIM card, the user scrolls through the menu options to reach MTN Menu, then select MTN Banking, and then Mobile Money. The user is then required to enter their identity number, which is checked against a database. The user then creates a five-digit PIN. All banking transactions are free, and every transaction initiated by the customer are notified in real time, irrespective of the day and time. The user is able to effect payments between individuals, as well as transfers to other bank accounts, credit cards and bill payments. Apparently fines for traffic offences can be paid this way, and a user can upload their electricity accounts with prepaid credits.

News items:

John Reed 'Mobile users branch out' Financial Times Friday October 7 2005 p 11

'Ringing in a new era for local financial services' Creamer Media's Engineering News Online:

<http://www.engineeringnews.co.za/eng/features/finservices/?show=73448>

Maya Fisher-French 'Banking out of the box' Mail & Guardian Online 16 August 2005:

http://www.mg.co.za/articlePage.aspx?articleid=248140&area=/columnist_maya_fisher-french/

Electronic authentication

■ United States of America

The US General Services Administration has published a plan to establish a decentralised identity management system. The aim is to provide a mechanism for secure single sign-on when obtaining access to federal e-government services. It is proposed to establish an 'E-Authentication Service Component'. That is, an infrastructure for authenticating the identity of a user of federal e-government services electronically. More information is to be obtained from the US Federal Register dated 5 August 2005.

E-authentication mission web site:

<http://www.cio.gov/eauthentication/>

The 5 August 2005 issue of the Federal Register is available at:

<http://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/pdf/05-15515.pdf>

A GAO Gateway document is available at:

<http://www.gao.gov/cgi-bin/getrpt?GAO-03-952>

Legal use of electronic systems

■ European Union: eJustice

A project named eJustice, supported by the IST Programme of the European Union and linked with an existing Austrian initiative called eRecht, aims to use a variety of digital technologies to provide secure access to legal procedures. The project will consider a wide range of issues, including the ethics of introducing electronic methods in the judicial process, to the processing of work, the use of biometrics and security. Apparently, the project partners intend to recommend future uses for smart cards in the judicial process and suggest technical solutions to provide for technical interoperability.

The project also aims to provide technical solutions for cross-border procedures, such as the European Arrest Warrant. The research project began in March 2004, and will end in February 2006.

Information Society Technologies web site:

<http://www.cordis.lu/ist/>

eJustice web site: <http://www.ejustice.eu.com/>