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## **TILT – Tilburg Institute for Law, Technology, and Society**

**Tilburg University**

**[www.uvt.nl/tilt](http://www.uvt.nl/tilt)**

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## **1. Introduction**

The Tilburg Institute for Law, Technology, and Society (TILT) is part of the Law Faculty at Tilburg University, the Netherlands. Established in 1994 as the Centre for Law, Public Administration and Information (CRBI) with only five employees, by 2007 it has grown into a fully-fledged institute of 30 researchers, headed by Prof. Corien Prins, Prof. Han Somsen, Prof. Cees Stuurman and Prof. Bert-Jaap Koops. Its early focus on information and communication technology (ICT) and law gradually changed into a technology-wide focus and, as a result, its name changed to TILT in 2004. The work at TILT focuses on technological developments from a multidisciplinary perspective – law, ethics, and social science – in the contexts of important domains of the developing knowledge society. As such, a key feature of the Institute’s research and educational programmes is the interaction between legal, public administration and ethics experts, between law, regulation, and governance, and between legal, technical, and social perspectives. Drawing on many years of experience, TILT is one of the most prominent European research and education institutes in the area of regulation of technology. Its principle area of research is law, but the Institute counts among its members distinguished researchers with backgrounds in ethics, biology, mathematics and sciences.

## **2. Research programme: general overview**

TILT’s current five-year research programme ‘Regulation in the Information Society: The Interaction of Law, Technology (in particular ICT and Biotechnology), and Social Structures’ focuses on the evolution of legal systems, regulatory structures, and enforcement mechanisms in light of technological developments. TILT’s extensive research portfolio can be divided into four main areas: technology regulation, eCommerce and eGovernment, privacy and identity management, and security and vulnerability.<sup>1</sup> Attention is focused on various dilemmas between emerging technologies and societal interests, for example, security versus privacy and freedom versus ownership of information.

TILT’s research has a national and international dimension. TILT currently participates in various international research projects. Among them are the *EU 6<sup>th</sup> Framework Programme* projects **FIDIS** (Future of Identity in the Information Society), **PRIME** (Privacy-Enhanced Identity Management) and **E-GOV** (Legal Barriers to Electronic Government). National projects included **PIONIER** (regulating biotechnology), **VIDI** (law, technology, and balances of power), **GEOGOV** (geo-information use in government) and **NvN IDM** (Personal Identification and Identity Management in e-government relationship).

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<sup>1</sup>Topics include e-government, e-commerce, e-health, regulation of ICT, biotechnology, and nanotechnology, privacy, identity management, e-signatures, biometrics, cybercrime, security, intellectual property rights, citizenship and governance, globalisation, and Europeanisation.

## 2.1 Technology regulation

Regulation is the major research area within TILT.<sup>2</sup> Key regulatory issues dealt with by TILT include: Should online behaviour adhere to the same rules as offline behaviour? Should regulation be technology neutral? Can technology regulate? Should technology be regulated and, if so, at what level (national, international, or through self-regulation)? How do ICTs and biotechnology impact traditional regulatory concepts, such as property and intellectual property? These questions are applied to a wide range of fields such as those mentioned in other key research areas. The experiences in ICT domains are also used to address regulatory issues involving other technologies, such as biotech and nanotech. TILT's current research interest is the interplay between the different modalities of regulation, such as law, market, technology, and social norms.

Various ICT-regulation studies<sup>3</sup> were funded by the Dutch National Programme for Information Technology and Law (ITeR). TILT researchers also performed various types of research on biotechnology and regulation.<sup>4</sup> The PIONIER project, funded by the Netherlands Organisation for Scientific Research (NWO), aims at an overall assessment of the regulatory challenge of biotechnology. The five-year project is designed to advance theoretical understanding and to gather the empirical information necessary for the design of an effective and efficient regulatory regime. It comprises extensive case studies of biotechnology in food and agriculture, human genetics, and patent law. From 2004-2008, TILT is conducting a NWO funded research programme on law, technology, and shifting balances of power. The central issue in this research is to understand how technology both strengthens and weakens the position of relevant actors, such as consumers and law enforcement authorities in modern society.

## 2.2 eCommerce & eGovernment

TILT's eCommerce research focuses on a consistent implementation of eCommerce-related legal concepts into the legal system, and on the value and meaning of traditional private law concepts in light of technological developments.<sup>5</sup> Special attention is being paid to issues such as self-regulation, software agents, personalisation, eAuthentication, and online dispute resolution.<sup>6</sup>

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<sup>2</sup>See amongst others: B J Koops, et al. (eds.), *Starting Points for ICT Regulation. Deconstructing Prevalent Policy One-Liners*, (2006), and H Somsen, (ed.), *The Regulatory Challenge of Biotechnology*, (2007). See for a book review of this work: K Getliffe Msc, Llm, 4:4 Script-Ed, 478-481, (2007).

<sup>3</sup>See for example: M Lips, S van der Hof, K Schalken, *Multiformity in information provision in a new media age. Challenged responsibilities for governments in Europe*, 2000 (ITeR no. 40).

<sup>4</sup>M H M Schellekens, J E J Prins, 'Regulatory Aspects of Genomics, Genetics and Biotechnology: An Orientation on the Positions of Germany, the United Kingdom and the United States', 2003, 7(1), *Electronic Journal of Comparative Law*; and E J Koops, M H M Schellekens, (forthcoming), 'Forensic DNA Phenotyping: Regulatory Issues', *TILT Law & Technology Working Paper No. 002/2006* Available at <http://ssrn.com/abstract=975032>.

<sup>5</sup> See for instance C Cuijpers, "A Private Law Approach to Privacy; Mandatory Law", (2007) 4:4, SCRIPT-ed, 318, available at: <http://www.law.ed.ac.uk/ahrc/script-ed/vol4-4/cuijpers.asp>

<sup>6</sup> B Aalberts, S van der Hof, "Digital Signature Blindness. Analysis of legislative approaches toward electronic authentication", 2000 (ITeR no. 32), F M T Brazier, A Oskamp, J E J Prins, M H M

TILT's eGovernment research analyzes and interprets the legal barriers to, and social issues surrounding, the development and sophistication of eGovernment services and communications. More specifically, it deals with data protection, dematerialisation, confidentiality, reliability and interoperability of eGovernment processes, pro-active service provision, personalisation, and access to, and re-use of, public-sector information. Various e-government studies were funded by ITeR.<sup>7</sup> In 2001, TILT conducted a study on the history and future of the legal and policy framework on Dutch public-sector information, commissioned by the Dutch Ministry of the Interior and Kingdom Relations. TILT participates in the project 'Breaking barriers to e-Government' (E-GOV) funded by the European Commission. The aim of the project is to investigate the legal, organisational, and technological barriers to develop e-Government at a pan-European level. The research project is a collaboration between the Oxford Internet Institute, Gov3, CRID (Namur), University of Murcia, and TILT. In 2006, TILT academics started a two and half year NWO/NvN-funded research project on 'Personal identification and identity management in e-government relationships'. This research studies the influence of electronic personal identification processes on the relationship between citizens and government.

### 2.3 Privacy & Identity management

TILT's Privacy and data protection focus is on (the implementation of) the EU Data Protection Directive, reasonable expectations of privacy, biometrics, RFID, and data mining and profiling, for instance in relation to Ambient Intelligence.<sup>8</sup> Also other aspects of privacy, such as bodily integrity and territorial privacy in light of new surveillance and monitoring techniques are studied. TILT not only focuses on privacy violations, but also on active privacy protection, for instance by means of Privacy Enhancing Technologies. Fundamental issues with respect to privacy, such as the commodification of personal data, are explicitly addressed.<sup>9</sup>

The changing role of identity and identity management in the information society is studied from the perspectives of user acceptance, new types of crime (identity theft) and the balance between personal data users, businesses and governments, and the individual. TILT participates as a partner in the European FP6 project 'Privacy and Identity Management for Europe' (PRIME). This integrated project has the objective

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Schellekens, N J E Wijngaards, "Anonymity and Software Agents: An Interdisciplinary Challenge", 2004, 12(1-2), *AI & Law News*, available at <http://rechten.uvt.nl/prins/upload/7122005162420366847515.pdf>

<sup>7</sup> See for example: M Lips, P Frissen, *Wiring government. Integrated public service delivery through ICT*, 1997 (ITeR no. 8).

<sup>8</sup> B J Koops, R C P Poels, R E Leenes, A M B Lips, J E J Prins, A H Vedder, M S Groenhuijsen, 2005, "Veiligheid en privacy in 2030: twee toekomstscenario's", Tilburg: Tilburg University, [Safety and Privacy in 2030: two future scenarios.]; B Custers, *The Power of Knowledge. Ethical, Legal, and Technological Aspects of Data Mining and Group Profiling in Epidemiology*, 2004, C Cuijpers, *Privacyrecht of privaatrecht? Een privaatrechtelijk alternatief voor de implementatie van de Europese privacyrichtlijn*, 2004 [Privacy law or private law? A private-law alternative for implementing the European Data Protection Directive].

<sup>9</sup> See C Prins, "When personal data, behavior and virtual identities become a commodity: Would a property rights approach matter?", (2006) 3:4 *SCRIPT-ed* 270 available at: <<http://www.law.ed.ac.uk/ahrc/script-ed/vol3-4/prins.asp>>.

of researching and developing solutions to empower individuals to manage their online privacy. The European Commission has awarded this project with a subsidy of €10.1 million. TILT is responsible for conducting social research and is Activity Leader for socio-economic research in this project.<sup>10</sup> From 2004-2008, TILT is participating in the EU 6th Framework Program FIDIS<sup>11</sup> dealing with ‘the Future of Identity in the Information Society’. Within this network of excellence, twenty four partners from various disciplines research the developments of ID systems and identity management, such as interoperability, privacy and security, forensic aspects, mobility, profiling, and the concept of identity.

## **2.4 Security & vulnerability**

Technological and societal changes cause uncertainties and security issues. These are studied in areas such as computer crime, digital law enforcement, and the reliability of information in the information society.<sup>12</sup> The legal aspects of measures to improve security or reduce vulnerability represent an important part of TILT’s research. Examples are the use of biometrics in authentication and identification, fundamental human rights in the digital age, the use of DNA in law enforcement, cryptography and information security. In cyber-investigation, the power to demand suspects to decrypt was researched in light of the privilege against self-incrimination (2000). A four-year networking project on jurisdiction and internationalisation, funded by NWO, focused in its second stage (2003-2005) on cyber-crime jurisdiction.<sup>13</sup> In 2007, TILT and Nijmegen University (departments of Computer Science and Criminal Law) established Cygris, the Center for Cybercrime Studies, in order to study cybercrime from a multidisciplinary perspective.

## **3. Lectures, conferences, workshops, websites, visiting scholars**

To provide additional expert insight into the areas of TILT’s research, various conferences, workshops and lectures are organised. Taught by international and national experts, TILT ensures the interaction between regulation, technology and society. Recent activities include:

- Reinventing Data Protection, with VUB and CRID, conference, Brussels, 12-13 Oct 2007
- Henk Scholten (Free University Amsterdam), Geo information: killer applications and rules of the game, 11 September 2007.

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<sup>10</sup> See: <https://www.prime-project.eu/>

<sup>11</sup> See: <http://www.fidis.net>

<sup>12</sup> P de Hert, G González Fuster, B-J Koops, ‘Fighting Cyber-crime in the Two Europe’s. The Added Value of the EU Framework Decision and the Council of Europe Convention’, 2006, vol. 77, 3-4, *International Review of Penal Law*, 503-524; B-J Koops, R Bekkers, “Interceptability of telecommunications: are U.S. and Dutch law prepared for the future?”, 2007, 31 (1), *Telecommunications Policy*, pp. 45-67; M H M Schellekens, J E J Prins, “Unreliable information on the internet: a challenging dilemma for the law”, 2006, Vol. 4 (1), *Information, Communications and Ethics in Society*, pp. 49-59.

<sup>13</sup> E-J Koops, S W Brenner (eds.), *Cybercrime and Jurisdiction. A Global Survey*, 2006.

- Jonathan Kahn (Hamline University, School of Law), Biotechnology implications for our ideas of identity and citizenship, 5 June 2007.

TILT not only communicates through its twice monthly English Newsletter,<sup>14</sup> but also through its website and electronic surveys. A first TILT survey is Domjur (<http://www.domjur.nl>) publishing domain-name case law and literature. This survey was commissioned by the Dutch Internet Registry Authority (SIDN). The Privacy Network (<http://www.privacynetwork.info>) provides case law on privacy issues around the globe. The Crypto Law Survey (<http://rechten.uvt.nl/koops/cryptolaw/>), is a survey of existing and proposed laws and regulations on cryptography, including import and export controls and domestic regulations. The Digital Signature Law Survey (<https://dsls.rechten.uvt.nl/>), provides an overview of existing and proposed legislation and policy documents with respect to electronic authentication technologies.

In 2007 TILT created a visiting scholar programme, and asked Edinburgh based Professor of Government Charles D. Raab to become the first TILT Visiting Scholar. Professor Roger Brownsword, head of TELOS, King's College London, is TILT Visiting Scholar 2008.

In the *TILT Law & Technology Working Paper Series* results of on-going research on regulation & technology within TILT are presented. The working papers are used for pre-publication dissemination of knowledge and to obtain feedback from the academic community.<sup>15</sup> Papers are included by TILT researchers, Visiting Scholars, and Fellows, and upon invitation by other researchers.

#### **4. Upcoming: International Technology Regulation Conference and Journal in 2008**

On 10 and 11 December 2008, TILT hosts a two-day international conference at Tilburg University on technology regulation: “**Tilting Perspectives on Technology Regulation**”. Leading scholars, representing different disciplines, will present papers that fit in roughly four categories: the role of law in stimulating or hindering technological innovation; fundamental values; protecting societies, and protecting technologies. The conference also marks the launch of a an international peer reviewed journal, *The European Journal of Law, Ethics, Technology, and Society* (Hart Publishing), which professor Han Somsen is co-editing with professor Roger Brownsword (King’s College London). Researchers around the world will be invited to submit papers with a view to publication in the maiden issue of the journal. See [www.uvt.nl/tilt](http://www.uvt.nl/tilt) for more information

#### **5. Projects under development**

TILT is currently developing several new themes and projects. Among these are projects dealing with:

- the quality of genetic information;

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<sup>14</sup> <http://www.tilburguniversity.nl/faculties/law/research/tilt/news/newsletter/>

<sup>15</sup> <http://www.tilburguniversity.nl/faculties/law/research/tilt/publications/workingpapers/>

- open-source models in biotechnology;
- the use of geographical data within government;
- biometrics;
- ‘human engineering’;
- legal aspects of virtual games, spaces, and communities;
- regulatory approaches to nanotechnologies.

## **6. Educational programme**

TILT’s educational programmes focus on the regulatory and legal aspects of the introduction of innovative technologies into society, and on the legal consequences thereof for the management of technologies within organizations. The cornerstone of TILT’s education programme is its international Master’s programme in Law and Technology. The programme focuses on regulatory and legal aspects of the introduction of innovative technologies. It includes courses on intellectual property rights management, legal aspects of biotechnology, risk management and regulation, and ethics of technology. TILT also provides an ICT track within the faculty’s Dutch Law Master Programme. TILT also teaches various discrete courses at graduate and postgraduate levels, for instance, in e-commerce, ICT contracts, privacy and data protection, intellectual property, public information law, and cyber-crime.