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Norwegian Research Center for Computers and Law

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1. Introduction

The Norwegian Research Center for Computers and Law (NRCCL) is part of the Law Faculty and Department of Private Law at the University of Oslo. Our centre has its origins in 1970 when research and development activities within the area of computers and law were initiated by Professors Knut S Selmer and Jon Bing. These activities were organised in 1971 as the Section for Electronic Data Processing under the Department of Private Law, and as the NRCCL from 1981. As a result of an initiative from the centre, the University of Oslo established the Section for eGovernment Studies (SeGoS), an interfaculty unit hosted by the NRCCL, in 1993. The aim was to develop an interdisciplinary approach to information and communication technology (ICT) and society, by combining law, computer science and social science, with bachelor's and master's programmes being one of the centre's pillars. Today the NRCCL and the SeGoS are comprised of around thirty researchers and are integral parts of research activities.

This brief presentation does not allow me to include all of the activities of our centre. Almost all attention will be paid to our research activities, but, even in this field, it is impossible to mention all of the excellent researchers and research work which form the basis of our centre. Moreover, this rough overview would create a totally wrong picture without mentioning that the NRCCL is in charge of comprehensive teaching activities. The SeGoS is responsible for two interfaculty study programmes within eGovernment studies (BA and MA, five years duration), and the NRCCL is in charge of a one year international master's programme, as well as other courses related to computers and law, for both law students and other students at the University of Oslo. People who know the centre well will hopefully underline the NRCCL as a place where students are met with great interest, and where research and education are understood as two aspects of the same challenge.
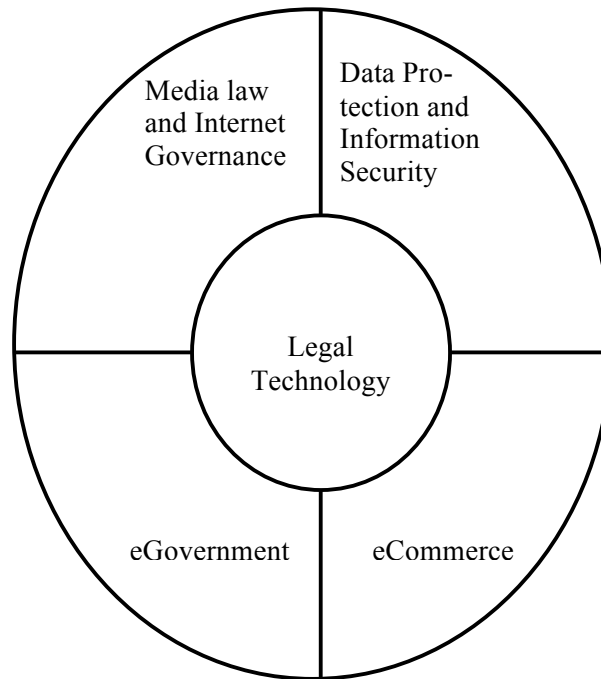
2. Research at the NRCCL

The interdisciplinary approach is relevant to all parts of our research activities, but has been especially important when approaching issues such as privacy, data protection, information security and eGovernment. Most other areas have a legal emphasis, but law is important in all parts of our work. An important characteristic of our legal activities is the ambition to cover a broad field of legal research comprising issues within private law and public law – as well as others which defy classification in these terms (e.g. privacy). This does not, of course, mean that the centre is able to cover every issue within the very broad spectrum of questions regarding ICT law and society.

The attempt to embrace legal issues irrespective of traditional legal classification should partly be seen as a result of the recognition that our research often contains questions related to both private and public law. For instance, the standardisation of ICT to improve information security could be seen as an issue within private law, while such standardisation, as an integral part of governmental regulatory strategies, is a question that should be classified as one of public law. One general experience is that the study of ICT often makes it necessary to cross traditional legal borderlines. Equally important is the fact that crossing between traditional legal areas is often

fruitful (though not necessary). Sometimes, research questions may be identified and evaluated in novel and richer ways if seen from an unconventional perspective. Analyses of automatic business transactions may, for instance, learn from research regarding automated decision-making in individual cases within government administration.

The current research policy of the NRCCL highlights five research areas:

Media law
and Internet
Governance

Data Pro-
tection and
Information
Security

Legal
Technology

eGovernment

eCommerce

Traditionally, communications law has been central to our research. The first research studies are from the beginning of the 1980s (i.e. before the divestiture of the telecommunications monopoly), and these studies have been significant for the development of a modern legal regime in this field. Nevertheless, traditional paper-based media (e.g. newspapers and publishing houses) are also of interest, as well as media broadcasting where, among other things, the development characterised as "convergence" (the breaking down of traditional divisions between media) creates challenges.

In recent years, internet governance (i.e. the management of the internet), has also gained great attention. Research is carried out on both traditional legal issues as well as on the organisation of business activities and relevant institutions etc. This often has an international or comparative character. Two highlights in 2009 will be an international conference "Internet Governance at the Crossroads" (29–30 January 2009 in Oslo) where issues like the liberalisation of the domain-name space, globalisation of Internet governance, net neutrality, online gambling and the WHOIS service and databases will be on the agenda. The book *Internet Governance: Infrastructure and Institutions* (Oxford University Press), will be released in conjunction with the conference. The book is edited by Professors Lee A Bygrave and Jon Bing (both of the NRCCL) and contains contributions from various international experts.

Media law is closely linked to the right to free speech, not least to freedom of expression and its regulation. It is also closely related to intellectual property law. The

NRCCL published the first book on legal protection of computer programs in 1973. Since then, topics like the legal protection of computer programs, databases and integrated circuits have been central research topics – especially in those areas where legal and technical solutions are intertwined (such as, for example, digital rights management systems). The NRCCL's activity is co-ordinated with the research activities of the Intellectual Property Rights group at the Department of Private Law.

Questions of data protection, privacy and information security probably represent our broadest and fastest-growing research area, and this family of research challenges has already been with us for several decades. The NRCCL played an active role when, early in the 1970s, two expert committee reports were put forward which later resulted in the Act relating to personal data filing systems (1978). This law was replaced by the Data Protection Act of 2000, but both laws were largely influenced by the *interest theory* which was developed in parallel with the two reports. A key figure was the then head of the Section for Electronic Data Processing, Professor Knut S Selmer who, together with Ragnar Dag Blekeli published the book *Data og Personvern* [Data and Privacy] in 1977. The interest theory has been further developed by our other researchers, but has remained a Norwegian specialty. Almost all Norwegian data protection and privacy laws to date use data protection interest theory as a theoretical and ideological basis, and European privacy principles are primarily supplements to this special, national approach.

Our research and discourse regarding data protection has resulted in several groundbreaking doctoral theses. In 2001 Lee A Bygrave defended his thesis *Data Protection Law: Approaching its Rationale, Logic and Limits* (Kluwer Law International, 2002), today regarded as an international standard work in the field of data protection. Stephen K Karanja's thesis *Schengen Information System and Border Control Co-operation: A Transparency and Proportionality Evaluation* (2006) discusses current core issues regarding, on the one hand, security and, on the other, data protection and human rights. That same year, Rolf Riisnæs defended his thesis *Digitale Sertifikater og Sertifikattjenester — Roller, Oppgaver og Ansvar,* which deals with information security, electronic certificates and the nature, characteristics and potential issues surrounding certification services.

The NRCCL has carried out research in information security since the mid-1980s, first in connection with data protection and, later on, as a more independent field of study. In recent years there has been research on the legal regulation of information security (i.e. research at the borderline between information security and regulatory management). Within the government sector, information security and protection of personal data are of central importance to both questions of regulatory strategies and techniques as well as issues regarding everyday eGovernment.

eGovernment concerns the use of ICT in the public sector (i.e. in connection with the exercise of government powers, provision of services to citizens and internal administration). Questions related to government and democracy also fall within this research area. The NRCCL has been researching issues on ICT in government administration since the mid-1970s, with one of the first research issues being the Norwegian housing benefit system, notably in Jon Bing's pioneering article *Automatiseringsvennlig Lovgivning* [Computer-friendly Legislation] (1977). Dag Wiese Schartum's doctoral thesis *Rettssikkerhet og Systemutvikling i Offentlig Forvaltning* [Rule of Law and Development of Information Systems in Government Administration] (1993) was based on a legal examination of the program code of the

government's automated decision-making systems. This thesis laid the foundation for elements of a systems development methodology which is today taught as part of the Master's course in eGovernment Studies. Research in the area of eGovernment is primarily based at the SeGoS and has a clear interdisciplinary character.

Electronic commerce is a collective term for a number of legal issues associated with the trading of goods and services on the Internet. Many of the issues are linked with the formation of contracts on the Internet, as well as with the basic contract mechanism. Key terms describing the legal issues connected with the formation and performance of commerce on the Internet are electronic signatures and certification services, electronic payment systems and liability – along with special forms of commerce such as public procurement or auctions. Olav Torvund's doctoral thesis *Betalingsformidling i et Rettslig Perspektiv* [transaction of payments in legal perspective] (1993) conveys fundamental analyses of electronic payment facilities.

Traditionally, contracts also deal with the sale or use of equipment for information processing or related services (e.g. telecommunications or software development). These issues are often grouped under the imprecise heading of information technology (IT) contracts. Liability issues are also examined (contractual and extra-contractual, as well as criminal and civil liability). Electronic commerce often presumes transactions across geographical borders. Therefore e-commerce often entails conflict of law issues in such transactions (questions of jurisdiction and choice of law), and there is often a need for comparative law studies.

The use of ICT as a tool for lawyers has always been of central interest to the NRCCL and is currently discussed under the label "legal technology". For lawyers, the core application of information technology is the searching and retrieval of legal sources. Jon Bing's doctoral thesis from 1982 about legal communication processes [*Rettslige kommunikasjonsprosesser*] has been extremely influential in our understanding and research within this field. The Lawdata Foundation, Norway's leading legal information system, has its origin in the same academic environment as our centre, and has partly been developed in partnership with it. Today, legal technology is not a research field of its own, but is rather an integrated element in other parts of our research. Decisions (support) systems in government administration, privacy enhancing technology (PETs), and lawmaking tools are examples of other legal technologies addressed through our four research areas.

A breathtaking library is the best incentive to high quality research and education, and we believe our library is (one of) the best computer and law libraries in the world! The collection of books holds approximately 10,000 volumes, and the library subscribes to 65 journals and periodicals. As a part of the University Library of Oslo, the NRCCL library can also offer access to a wide number of databases, electronic journals and other electronic resources. The NRCCL has always considered the library a very important part of the centre and high library budgets are one of the prerequisites of being at the forefront of international research.

3. International Dimensions and the Future

Computers and law is an international research field, something which is evident to those examining the activities of our centre. One important element of our international efforts is the LLM in Information and Communication Technology Law

– a one year master's programme, which attracts students from all continents, something which mirrors the international environment of the NRCCL.

It would hardly be possible to attract international students at master's level without a general understanding of the international character and importance of international research cooperation – both in Europe and overseas. The NRCCL has always put great effort into establishing contacts with other relevant research institutes all over the world, though our capacity to maintain close relationships may vary over time. Institutions within networks like e-Clip, LexConverge and LEFIS are important parts of our international orientation.

One important quality for successful international cooperation is that we, even in the future, are able to combine thorough knowledge of national issues with a broad approach to parallel international subjects and vice versa. By choosing this dual approach, we hope, in the future, to be the leading Norwegian academic institution within our field. At the same time, we strive to be an interesting and very visible international collaboration partner.