Joachim Benno[*]
Why the Use of ICT Engenders Legal Problems – in Search of a Common Denominator

"...The purpose of a deeper perspective is above all to provide opportunities for more initiated discussions and more soundly based proposed solutions. In many fields, therefore, this can be just as much a question of looking up and perceiving the connection between different activities and different types of legal solution. This is something which can require far greater analytical inputs, because the material will be more extensive, but it is at the same time a method which can lead to far more uniform and appropriate solutions."

Peter Wahlgren [1]

1 In search of a common denominator

The emergence of the "information society" confronts legislators, judicial practice, businesses and individuals with regulatory challenges of apparently unprecedented extent and complexity. At the centre of it all we have the Information and Communication Technology (ICT), not only as the motive force of development and of the possibilities which the information society affords, but also as a factor generating legal problems which have to be dealt with. Most traditional areas of the law are affected, often by common and at the same time overarching problems disturbing not only specific legal issues, but also basic structures of the legal system as such.

Although legal aspects of the use of ICT have been addressed and dealt with by academics in the Nordic countries since the late 1960s, it is only since the 1990s that ICT-related legal problems have gained more general attention through all levels of society. The basic reason is that the technology and its use are achieving a higher grade of penetration and are thus bringing the problems out from the rooms of academics to the practical spheres of everyday life. The basic driving force is, of course, the continuing development of the Internet and the World Wide Web as open and standardised platforms enabling small companies, the public sector and households eventually to make broad use of ICT as a tool for communication and the carrying out of different types of transactions.

> In the present account, the term "transaction" is used in the broad sense, so as also to include unilateral acts and activities, such as criminal acts and situations where somebody uses a freely accessible database in order to transmit or collect

---

[*] *Joachim Benno* is a member of the IT Law Observatory. See presentation in Annex 1.

[1] Peter Wahlgren, *Rättsfrågor kring tjänster i nät*. In:: Nordisk Årsbok i Rättsinformatik 1996. Martin Brinnen, ed., Stockholm, Norstedts Juridik, 1996, pp. 49-58, 53-54. (Freely translated)

information, without necessarily entering into a contractual relationship with the provider of the database.

However, even though there is a vast amount of literature, reports, public investigations, etc. concerning ICT-related legal problems, these are generally devoted to specific legal problems or areas of the law. Overarching studies exist, of course, but strikingly little attention seems to have been devoted to understanding the basic question in this context, namely *why* the *use* of ICT, in itself, engenders legal problems.[2]

In effect, in such cases as described, the problems in question are often sought to be solved without a deeper understanding of what it is that actually generates the very problems to be solved.

The purpose of this article is to draw attention to, and shed some light on, the question of why the use of ICT engenders legal problems. The article demonstrates the possibility of pointing to common factors – denominators – making it more difficult for individuals, businesses, legislators and judicial practice to understand and deal with the transaction and its environment.

This is not just an academic question. The possibility of pointing to one or more common denominators to the ICT-related legal problems arising, not only provides opportunities for better understanding the nature of the problems, but also creates opportunities of problem solving in a wider perspective, in which the solution in one area can also furnish guidance for solutions in others.

This in itself provides for better results in legislative and judicial activities and, furthermore, for businesses and individuals to protect and vindicate their rights in different situations. Businesses which devote resources to gaining a deeper understanding of the regulatory framework governing their business activities, will find themselves in a better position not only to handle regulatory issues in a cost-preventing and value-adding manner, but often also in gaining competitive advantages by feeding this knowledge into business strategy, product development and the handling of public/regulatory affairs.

2 The cause and effects

2.1 The transforming character of ICT

Most of the legal problems arising in the context of ICT do not concern new, unregulated, legal phenomena. On the contrary, in most cases they concern "traditional" transactions, where the *use* of ICT to *perform* the transaction renders current law incapable of serving its intended purpose. To understand why the use of ICT has this effect, one must firstly understand the changes ICT brings about as a tool for performing different types of transactions.

Basically, ICT provides new ways of performing transactions and at the same time is transforming the environment in which transactions take place. Compared with more "traditional" ways of performing transactions, the use of ICT has the effect of dissolving the

---

[2] A good exemption, well worth studying, is Herbert Burkert, *Which Law for the European Information Society?* (text of a presentation given at the EC Information Day for senior executives of IEPRC, ICRT and EPC Brussels, 31st January 1996), http://www.gmd.de /People/ Herbert.Burkert /Brussels.html (as of 16th March 1998 at 10:47 am). See also Peter Seipel, *Computing Law. Perspectives on a New Legal Discipline*. Stockholm: Liber 1977.

contours of a transaction and blurring the difference between different types of transaction. In addition, transaction time inputs are diminishing and geographical distance is ceasing to matter. Ordering goods and services, carrying out banking transactions, making travel and other ticket reservations, collecting and passing on information – all these things, and much else besides, can be done through one and the same medium, from one and the same position, without the parties involved needing to move from A to B or meet face to face.

Another way of describing this is by saying that ICT is transforming the characteristics of the transaction, and entities such as *time, frame* and *space*, as determinants of the perception and performance of different types of transaction.[3]

2.2 Effects on insight, understanding and perception – consequences for individuals, businesses, legislators, and judicial practice

The above-mentioned changes make ICT-assisted transactions more difficult to trace, identify and distinguish, in relation to more "traditional" ways of performing transactions of different kinds – the transaction, its features and consequences, becomes more difficult to "grasp". The consequences for individuals and businesses are manifested through less knowledge of the transaction as such and of its various elements. These effects are accentuated by the problems of knowledge and understanding already entailed by the technology underlying the transaction.

In more concrete terms, the use of ICT can make it more difficult to *distinguish between different types of transaction* whose performance, previously, demanded measures that were more distinct and distinguishable. That which, in reality, would seem a manifest impropriety to the individual, becomes harder to distinguish in an electronic environment. The connection between act and consequence becomes less clear and the borderline of the impermissible therefore becomes easier to transgress, both deliberately and inadvertently. For example, appropriating other people's banking assets through the Internet by cracking their PIN codes can be expected to provide a lower moral threshold to cross, than the physical act of breaking into and robbing a bank.

Furthermore, it is probably impossible for the uninitiated web surfer to perceive the borderline between proper and improper use of copyright material available through the Internet. Perhaps he or she does not even realise that an act entails the copying of copyright material, comparable to the manifest act of copying a book from end to end and producing a certain number of copies for further distribution, with the help of a copying machine.

ICT has also made it more difficult to tell *what is required in order for an act to be completed*, and thus legally binding. This can apply both to commercial transactions, for example when entering into a contractual relationship, and to the relationship between public authorities and private individuals, for example concerning the date when a document is deemed to have been received. Even though legal rules, case law and custom may point out or indicate certain elements as determinant in these respects, it may be unclear to the parties concerned *when* these elements occur in an electronic environment and, moreover, *how* evidence of their occurrence can be secured and presented.

Another consequence is that it becomes more difficult to *identify* the other party and to decide in *what capacity* and with *what authority* he or she is acting – for example, whether the

---

[3] Cf. Herbert Burkert, *ibid.*. Burkert describes these aspects in the way that ICT invites – by its basic characteristics – uses that seek to overcome the limitations of time, complexity, quantity, space and physical representation, and that it does so in a manner that makes the process appear to the user as intangible, invisible and variable.

opposite number is the person he or she professes to be, is acting in a consumer capacity, has due authorisation (e.g. power of attorney), is over a certain age, and so on.

Furthermore, in connection with "traditionally" performed transactions, the individual can normally be expected to be in reasonably good *control of the information* which he or she provides, whether directly or indirectly, and reasonably able to decide *who* receives that information and in what way. The opposite applies to electronic transactions, the individual often being entirely unaware of the "electronic track" which he or she leaves behind him and, consequently, of the person or persons to whom these tracks become accessible.

To this are added the above-mentioned changes of *time*, *frame* and *space* as determinants of the performance and perception of the transaction. Everything happens faster, the margins for reflection and consideration are diminishing. Geographical distances are losing their practical relevance, and it is becoming less and less easy to ascertain the location from which a party trades or carries on his business, or the geographical source of information. With a growing risk of rights being lost, this leaves the user with less insight and understanding of the transaction, its elements and its consequences.

The problems which the use of ICT creates for legislators and judicial practice are to a great extent matched by the problems described above in relation to individuals and businesses, but of course in terms of the perspectives and tasks of these institutions; the transaction and its parties are growing more difficult to trace, identify, define, classify and characterise, which poses problems both in the development of new legal rules and in the modification and implementation of existing law.

Allowance also has to be made for the fact that, since the design of the regulatory structure and its implementation are to a great extent based on the possibilities of the individual understanding the transaction, its elements and its consequences, the legislator and judicial practice must also relate to the problems which the use of ICT presents to the user.

In addition, the legislator and judicial practice must also relate to the insensitivity of technology to political boundaries, the very boundaries which impose restrictions on their competence and possibilities of action.

2.3 Effects on regulation – the framing and purpose of a legal rule

To fully understand why legal problems arise from the use of ICT, the consequences for individuals, businesses, legislators and judicial practice must be seen in the light of the design and purpose of the regulation in question.

Here, on closer analysis, one finds that the purposes to be served, the interest or interests to be protected or reconciled, are very often represented by criteria or concepts that are hard hit by the transforming character of ICT, i.e. criteria and concepts based on the possibilities of the parties or the user to understand and foresee the transaction, its scope and consequences, as well as its positioning in time and space, and so on. Consequently, the criteria laid down for a legal rule to take effect, often loose their relevance for the accomplishment of that rule's purpose and the balance sought between the different interests involved.

In the light of the above discussion, we find that the use of ICT impacts above all on legal criteria and concepts based on knowledge and perception of:

- **Who** (which person or persons) are involved in the transaction or commit a criminal act, and in what capacity that person or persons act.

- **What** constitutes the object of the transaction/protection and how this is to be classified, defined and delimited, e.g. in relation to various types of exclusive rights and to data collections of importance for personal privacy.
- **Where** the transaction/criminal act takes place, where the effect occurs, where the party/culprit acts from, where the information originates and is supplied from, where a party can be deemed to be established, and so on.
- **When** an activity has legal consequences: when a legal commitment occurs, when a document is to be deemed to have been received, and so on.
- **How** the transaction and its various stages are performed, how evidence is presented and evaluated in these respects.

3 Examples

The "blurring" effect on different types of transactions is a fundamental element in most of the ICT related legal problems that arise. The actual problems may be related to specific fields of law or to the particular contexts in which they appear. In IT Law Observatory Report 6/98 examples are given which illustrate how legal criteria and concepts, workable in the context of "traditional" transactions, either fail to serve their purpose or demand a new understanding of the same transactions, when performed with ICT.[4] The examples concern freedom of expression and information, copyright, penal law, protection of privacy, the distinction between "product" and "service" in sales law and taxation law perspectives, contract law, imaginary/virtual organisations and applicable law and jurisdiction.

From a regulatory perspective, maybe the most interesting development over the last couple of years comes from the convergence between the IT, telecommunications and media sectors. The convergence phenomenon serves as a good example of the fact that the use of ICT brings about common and at the same time overarching problems disturbing not only specific legal issues, but also basic structures in the legal system as such.

3.1 The convergence between the IT, telecommunications and media sectors

Convergence as a phenomenon can be described in various ways, depending on the perspective that is being discussed, and with varying degrees of complexity. The conditions which, in the context of technical progress, are leading to the convergence of infrastructures, services and apparatus, are fundamental. To this are added the market movements whereby actors in different sectors are involving themselves with one or more neighbouring sectors. The legal consequences of convergence are revealed by the increasing difficulty of distinguishing between the IT, telecommunications and media sectors, which used to be relatively clearly segregated. One and the same service can, for example, come under different, possibly several, regulatory instruments, depending on the medium or channel of communication used for conveying it to the recipient or on the manner in which the recipient obtains the service. In addition, technical progress is also bringing new types of services and phenomena and new possibilities of conducting telecommunications and media activities, whose subjection to the existing regulatory systems may not be very practical or convenient.

---

[4] Joachim Benno, *The "anonymisation" of the transaction and its impact on legal problems*, IT Law Observatory Report 6/98, ICT Stockholm: ICT Commission 1998, pp. 12-25.

This has to be viewed against the background of the regulatory instruments of these sectors being framed on different premises, with different underlying political motives and aims, and with different authorities in charge: The – more or less – unregulated IT sector, which, on the basis of business and consumer policy incentives, is governed by market legislation; the telecommunications sector, which is being liberalised in order to achieve effective competition for the achievement of particular aims of telecommunications policy; the media sector, which is governed by democratic and cultural policy aims, and in which the State has taken upon itself a special public service responsibility in radio and television broadcasting.

The effects which have now been described not only change the ability of existing regulatory instruments to serve their purpose, they also impact on the basic preconditions and assumptions of existing law.

For the market actors this, amongst other things, leads to difficulties in identifying the regulatory framework and the legal obligations to which they are subject when carrying on their business. This problem is accentuated by the fact that these businesses find themselves in an environment which, instead of being, as previously, characterised by a relatively simple value-chain, is becoming a market which is hard to define and is characterised by a highly complex value-system. The future success of these businesses depend on their ability to adapt to these changes, be innovative and rethink in terms of customer loyalty, product development, market positioning, internationalising and pricing.

From this perspective, the businesses acting within the converging sectors are highly dependent on a clear and foreseeable regulatory framework, which at the same time assures them of the necessary freedom of action to adapt to the changes that convergence brings about.

The proper handling of these regulatory effects is therefore crucial, not only to the businesses affected, but also to national economies depending on these involved markets to be successful and innovative. A regulatory framework that is inappropriate and ineffective will hamper and negatively effect investment and strategy assessments, which in turn will hamper the development of new services and effective infrastructure solutions.

There has been extensive work within the EU, both at national and transnational level, for adjusting the legal framework to the progress of convergence. Since 1997 the Commission has issued a Green Paper, a working document and a communication on convergence. The experience gained from this process and the 1999 review of the telecommunications regulations, forms the basis of the new regulatory framework for electronic communications that was introduced in 2001/2002. In the so-called regulatory package to govern the electronic communications sector, a more horizontal regulatory approach is adapted, i.e. the same rules are to apply to communication infrastructures regardless of the kind of infrastructure used and the type of service mediated.

4 Concluding reflections

4.1 The transforming character of ICT – a common denominator

The discussion in the preceding sections deals with the question of why the use of ICT engenders legal problems. The discussion shows that a basic explanation is to be found in the way the use of ICT affects the time, frame and space in which the transaction takes place and thus, in turn, affects the insight, understanding and perception of different kinds of transaction.

In order to counteract and cope with the effects of the use of ICT, attention has to be focused on the use of legal criteria and concepts based upon the identification of the questions of who (party, culprit, subject for protection), what (object of, respectively, transaction and

protection), where (direction, effect, establishment, origin), when (legal obligation) and how (the various stages of implementation, pleading and evaluation of evidence).

This must, furthermore, be seen in the light of the framing, wording and structure of a legal rule, its purpose and the balance sought between different interests and also with an awareness of the international perspective, with a variety of legal systems involved.

The understanding of these effects as a common denominator for the legal problems deriving from the use of ICT, not only provides for a better understanding of the nature of the problems, but also creates opportunities of problem-solving in a wider perspective, in which the solution in one area can also furnish guidance for solutions in others.

4.2 Legislative techniques to handle the problem

Various legal techniques for tackling the problems posed by the transforming character of ICT are discussed in IT Law Observatory Report 6/98.[5] It is suggested that in certain respects greater flexibility is needed in legislation, which among other things could mean less distinctness and predictability. Not infrequently, however, such legislation is criticised as providing scope for arbitrary decision-making, reducing predictability and creating uncertainty about the legal position.

Basically I endorse this reflection. Generally worded statements of objectives and general clauses must not be a "cop out" in situations where the legislator is working against the clock and with inadequate supportive documentation. This does not augur well for the quality of the result. The same goes for excessive reliance on the analogical method of interpretation as sufficient means of solving ICT related problems within the scope of current legislation.

On the other hand, this does not rule out the need for greater flexibility in legislation. To counteract the legal problems entailed with the use of ICT, it is often necessary to provide legislative solutions that allow special circumstances in the concrete case to be taken into consideration and which at the same time afford scope for the development of more exact principles in the process of interaction between legislator, judicial practice and market. In this way the codified law can become more dynamic and can grow within given frames which at the same time ensure stability; the continuity of legislation will be promoted, at the same time as the problem of rapidly obsolescent norms out of tune with technical progress can be counteracted.

It is immensely important, however, that more flexible legislation should provide clear and steady frames within which the freer assessment is to take place and which are based on the interests that the current legal rule is meant to balance or safeguard. For greater predictability and as a form of guidance, these frames can very well be supplemented by non-exhaustive examples and presumptions, i.e. guidelines.

Another approach is the, above-mentioned, "horizontal" approach, based on the principle of technological neutrality, used in the EU new regulatory package governing electronic communications. The horizontal approach in this context implies that the same rules are to apply to communication infrastructures regardless of the kind of infrastructure being used and the type of service being mediated. This solution should be seen in the light of the convergence phenomenon and the regulatory implications that this development brings about, blurring the distinction between the IT, telecommunications and media sectors. Basically, this seems to be a promising and necessary approach to dealing with many of the problems arising in this context.

---

5 Joachim Benno, *op. cit.* at pp. 25-28, 29-31.

However, it is important within this legal framework, as well as in other situations, that the legislator should not blindly rely on the principle of technological neutrality – implying that regulation should focus on the transaction, irrespective of the technology being used to perform the transaction – to solve problems relating to the use of ICT. The principle of technological neutrality is not, and should not be treated as, a goal in itself. In doing so there is an imminent risk of losing sight of the actual aim of the regulation in question and unintentionally altering the balance originally sought between different interests.

4.3 The wider perspective

When facing the problems which ICT entails in the legal system, it is important that one should also consider the more fundamental, overarching perspective: A transformation is taking place of the whole of the society, in which the legal system is one of the pillars on which the social order rests. In democratic states, the foremost task of the legal system is to manifest and maintain the democratic ideals, and legislation is framed in conformity with those ideals.

One of the greatest risks here is that the complexity and rapidity characterising the development of the information society will result in prevailing ethical and moral values being undermined and changed without any standpoints being consciously adopted (cf. the above discussion concerning the use of the principle of technological neutrality).

This is not to say that there can be no reason for a revaluation of prevailing views, but this must be done on the basis of a deliberate standpoint concerning the consequences that this may have for both democracy and the individual. Among other things this has to take place within the democratic process and with an open, initiated debate in which everyone has an opportunity of taking part.