E-Government: Chances, Checks and Concepts

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1. The Workshop

On Monday, November 27th, 2006 the Central State Office for Administration in Zagreb held a workshop on E-Government. The workshop was part of the ongoing work of creating a new Law on General Administrative Procedures. As the new law shall implement e-government as the most advanced technique of public administration, it is necessary to define the scope of the regulation, point out the possibilities and clarify the hindrances. Additionally, the workshop was to present the German example of E-Government legislation and the boundaries to such legislation set by European law.

The workshop was organised by the CARDS 2003 Programme Team and SIGMA, the joint initiative of the OECD and the EU, in collaboration with the Law Drafting Working Group of the Central State Office for Administration. There were 20 participants from several ministries and administrative bodies. The workshop was led by Dr. Jan Skrobotz of Potsdam, Germany. His expertise in that field stems from his continuous research on E-Government and his practical work in the German ministry of justice as well as in the town administration of Berlin, both in the respective E-Government departments.

2. The Results

The workshop has shown a very high level of awareness regarding the questions of E-Government among all participants. It quickly became

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clear in the course of a lively discussion opening the workshop that the
hopes and fears connected with the term E-Government are no different
in Croatia than in Germany or other European countries. And just as in
these foreign countries, it was soon agreed upon that E-Government is
an important part of the process of modernising and reforming public
administration. It has to be embedded in this process and it is not a cure
itself. It also became clear that drafting a law or implementing regulations
on E-Government was a task as complex as the area dealt with. In no way
was it regarded as preferable to simply translate a foreign law on E-Go-
vernment into Croatian. On the contrary, the law needs to be developed
from the grounds of the Croatian public administration law.

3. Aspects in Detail: E-Government

The scope of the regulation was discussed. The term »E-Government«
was analysed, as were the terms »E-Administration« and »E-Assistance«.
In its broadest sense, »E-Government« means »to utilise the Internet for
administrative purposes«, thus resembling »E-Commerce«, the use of the
Internet for business transactions. »E-Administration« as a term seems to
fit better, though, since the area covered here is better characterised by
»administration« than by »government«. The term »E-Assistance« is used
here as a form of E-Government that does not require or contain legally
valid transaction elements.

The manifold uses of information and communication technology can be
categorised as internal and external use, and the latter as information,
communication and transaction, where transaction is the most complex
and most demanding form. The former ones are much easier to shape.
Legally binding two-way communication requires a lot more than a server
and a content management system, technically and legally speaking.

a) Internal use

The internal use of computers and electronic networks can already be a
relevant benefit for public administration as well as for the general public.
The masses of data alone, required and dealt with in public administra-
tion, have now for quite a while become impossible to handle without the
help of computers. The social security and tax administrations are a good
example. To this pure necessity we must now add the possibility of com-
puter networks – files and records can be kept electronically, fulfilling the wish: »any information, anywhere, at any time, in any form«. The necessary information can be found easily, even among hundreds of thousands of files. Several civil servants can work on the same case by simply sharing the same electronic file. Superiors can control the files without interfering with the work, as can the parliament or the courts. Different agencies can share information effortlessly. An example for that is the German programme DIGANT, by which the registration authorities send their data on names and addresses to the Bundesdruckerei, where passports and ID cards are printed. Other examples are databases kept by one agency and made available to all other administrative bodies, dealing with laws and ordinances, rulings and judgements, or geodesic and cadastral data, among others.

This internal use of information technology, though it is seldom regarded as »E-Government«, needs regulation as well. Questions on data protection arise. When the state has databases on every aspect of its citizens’ lives, there are questions on how this information will be used and to what purpose, when it will be corrected if wrong, and when deleted. The form in which the information is kept – the electronic form – creates new problems that also have to be solved: How are these files saved and archived? The citizens concerned, the courts and even – when introducing acts on freedom of information – the general public need to have access to the information, and not only now, when incompatibilities are rather limited, but also in the future, in 30 years or more. In some cases even a hundred-year-old deeds and documents are needed, a time span unheard of in computer technology.

b) Publication

One aspect of the external use of the Internet for administrative purposes is the publication of information. This can be as simple as the opening hours and the jurisdiction of an agency, or include answers to frequently asked questions such as: What are the requirements for a specific permit? What documents do I need to bring with me or send with the application? How much does the service cost, and can I pay by credit card? How long does the process usually take?

The most needed forms can be put on the Internet for the public to download, possibly with a short or longer explanation of how to fill them in. The forms could be provided electronically, programmed so that they are
easier to fill in, and thereby simplified. Questions or blank spaces obviously irrelevant for this applicant, as deducted from the previous answers, could simply be hidden, while relevant but often overseen questions could be highlighted.

Other information to be published could be the information aggregated by public administration, for instance data saved in the commercial register, the register of political parties or the land register. Other examples are patent specifications, available on the Internet in Germany and in the United States, dating back into the 19th century, laws and legislative documents, judgements and decisions, statistical data and geodesic information.

c) Communication

While publication of information is rather unidirectional, communication as understood here is the bidirectional use of the medium, especially by e-mails. There are several steps in an administrative procedure where information needs to be shared between public administration and a citizen in an informal way. A question may arise regarding a statement in an application form; public administration can ask the citizen to specify that particular point by letter, by phone – or by e-mail. Likewise, an appointment can be made and the documents that have to be brought along might be specified. This part does not need special technical or legal means because it only prepares legally valid decisions, administrative acts, for example.

d) Transaction

The most interesting but also most complex of E-government applications are transactions, i.e., legally binding electronic messages sent over the Internet. The scope of »E-Administration« is in some considerations reduced to this form of information exchange, although we can see here and in the workshop that less complex applications, such as publication and communication, are a form of E-Government as well.

The goal is the fully electronic transaction, at least in some areas: Citizens apply in electronic but legally binding form. The data are sent to the responsible agency where they are processed in an as automated form as possible. Public administration’s decision is sent out again in electronic but legally binding form. Compared to the paper world, in which public
administration has been emerged until now, even a partial »electrification« of the usual process seems to be an improvement. For citizens, for instance, the internal data processing is of little interest as long as they can apply in electronic form and the decision reaches them promptly. However, for public administration the internal organization is of much greater interest than the »interface«, the communication with citizens – applications and administrative acts can be taken in or served as letters nearly as efficiently as in electronic form. The differences are bigger, and the possible gains much greater with electronic documents and an effective information management system.

e) One Stop Shop

One of the most frequent »annoyances« of bureaucracy is its complexity. Citizens as »outsiders« are neither familiar with the distribution of responsibilities among the different authorities nor do they know which requirements exist for each specific administrative procedure. Foreigners, for example investors, have even less chance of understanding this. »One Stop Shops« have been proposed as a solution to this problem. They offer one place where every problem would be solved, at best with one case manager. This manager oversees the responsibilities as well as all requirements, and guides citizens through all stages of the process, regardless of how many agencies are involved. He does not decide any of the cases, though.

This »user friendly« approach is quite costly when realised with civil servants. It can, however, be realised with computers as well. For this, a portal is used as the one virtual point where citizens find all public administration’s services, regardless of the responsible agency. The services are ordered by the citizens’ problems and needs. A citizen has moved, for example, and wants to give his new address to all agencies that need to know it. The portal could list the possible addressees and their specific form or other requirements, or it could simply take in that information and distribute it adequately. Other examples are the name that has changed after you married, the car you bought or sold, or all the different aspects of co-operation with public administration when you are an entrepreneur or a business. Another advantage of this solution is its possible privacy enhancing effect: All responsible agencies have the information they need without the need of sharing them, citizens can retain the control over their data, and no case manager needs to know the information either.
4. Chances

The workshop’s discussion has clearly shown the expectations that are connected with E-Government in Croatia, and especially the Croatian public administration. As in America, Europe and Germany, the main goal is an administration that is simple, transparent and available to the citizen, and cheaper than today’s civil service. The phrase, »to make government work better and cost less«, coined by the American Clinton administration as early as 1993, can sum up these hopes for Croatia, too. It is remarkable though, that although bureaucracy was regarded as a problem that was hoped to be overcome by the means of E-Government, it was transparency as a goal that was quite often named, and obviously quite wished for in Croatia.

a) »Make Government Work Better«

To »make government better« is quite a reasonable aim. Modern information and communication technology has not only the potential to overcome the boundaries of time and space. It is already in use in all areas of society, in the private as well as in the public sector. The cases can be decided faster and better, when all relevant information is easily available on every desk of public administration. Bureaucratic needs can in part be fulfilled by computers, thereby easing the civil servants’ work. Public administration can easily inform the citizen about the necessary steps of an administrative task, of the documents needed and the authorities concerned, and even of the status of a particular case. Furthermore, many processes that are quite complex and time-consuming today can be simplified by using modern technology. That, of course, requires more than just the introduction of computers. Government has to be »re-invented», as the Clinton administration said, and it can be. Every step of each process should be looked upon thoroughly, questioned as to whether it still is necessary, whether it can be simply left out, or substituted by something less complicated. Computer technology and its possibilities enable us to do so.

b) »Make Government Cost Less«

However, it is hardly more than a wish to make government cheaper by introducing modern information and communication technology to the
public sector. The numbers thrown into the discussion from various sides are projected wrongly, at best, if not simply made up. It is often forgotten that information technology costs money, and its use requires additional personnel. Computers are needed, together with an information infrastructure, computer experts, maintenance and training. The infrastructure needed for electronic signatures is quite complex and costly, both for the political economies and for the users. The German government calculated the costs of making the federal administration’s services available on the Internet – where possible – with 1.65 billion Euros. This already large sum has to be viewed against the fact that in Germany the main administrative burden lies with the single states – the Bundesländer – and local authorities. The overall costs are therefore sometimes estimated at 10 billion Euros.

The opportunities to save money are quite rare. Economically speaking, it is possible to save money by cutting services offered, by reducing ineffectiveness, or by assigning the work to computers or to your »customers«. Only the third and the fourth alternative have to do with E-Government. The third, automation, is the business model of e-commerce firms like Amazon, eBay and Google. These companies produce huge revenue by doing as little as possible, assigning all tasks to computers, or to the customers. Amazon, for instance, lets its customers review and recommend books similar to the one in question. Google has no employees selling ads at a certain price, but lets its customers define the price in an auction, thus outsourcing all the sales work to the computer. Online banking and online check-in are other examples of how to utilise the customer, thereby reducing costs. It is now hard to transfer this concept to public administration and its »services«. Not all the tasks fulfilled by public authorities are business-like services offered to an applicant and paid by him. A lot of public administration’s work has no specific beneficiary but is done for the general public, police work for example. And of the services offered, there are very few, if any, that are easily automated. The vast majority requires a civil servant to decide a certain case, and cannot be dealt with as efficiently by the computer.

5. Checks

The workshop participants were very much aware of the hindrances that have to be overcome before E-Government can be implemented.
a) Digital Divide

Interestingly enough, it was not the necessary adaptation on public administration’s side that was most often mentioned during the workshop, but rather what is often called the digital divide between those citizens who have access to modern information and communication technology and those who don’t. E-Government requires a lot of resources such as money, time or know-how, both in public administration and with citizens and the economy. Not every local authority, and not every citizen is by now ready to utilise modern communication means. E-Government services therefore need to be introduced without force; they should be an additional offer rather than a substitute.

b) Privacy Issues

Data security and data protection and privacy were mentioned, too. The increased use of computers bears the risk of ever greater and extensive data bases storing all information available, whether needed or not. Privacy laws need to ensure the necessary high level of data protection also with regard to the data protection directive 1995/46/EU.

c) Form Requirements

However, the greatest problem is probably the legal framework, the administrative laws themselves. Not only the everyday work is based on paper, the laws are, too. In Germany only, there were an estimated 4,000 rules dealing with the form of administrative procedures, applications and administrative acts, all referring to paper as the main information carrier. To change them all individually was considered as a task far too complex, compared with the possibility of simply allowing the substitution of paper by digital data.

The problem is that the law prescribes the use of paper documents and especially signed documents for special reasons. There are ten functions attributed to signed paper documents, and not all of them can be adequately fulfilled by electronic files, not even with electronic signatures.

Paper as the actual information carrier perpetuates the information, thereby allowing the sharing and keeping of information without regard to individual persons – the very base of any administration. It allows its owner to show the information to a third party, proving, for instance, the rights given to him/her. Driving licenses or building permits are examples for this. The necessity of keeping information in readable form allows oth-
ers to control the information owner, be it public administration or a business: Administrative files permit superiors, the courts or the parliament to reproduce and understand public administration’s work and its outcome. In the same way businesses need to keep record of their activities so that they can be controlled by public administration, the tax administration, for example. Paper transports information in a very special way: It allows information to be kept only once, in a single, non reproducible sheet. By this the owner of the paper can legitimise himself/herself as the only owner of the right put down in the paper. Money bills are the widest known and used examples for this, as well as cheques and passports. And paper is – at least it has been until today – a sign for seriousness, perhaps stemming from the expenditure it until recently took to produce a written document. Important information is still printed out, judicial lays believe contracts only to be in force when they exist in written and signed form, and until today solemn acts often include a specially designed document that is handed over, for example the appointment of a minister.

The handwritten signature has four main functions. It finalises the document. Unsigned documents are often only drafts whereas the signature shows that this version of the document is accepted by the signatory, and the text following the signature is often deemed as not being covered. The signature reveals the identity of the signatory as it comprises of his/her name. It secures the authenticity of the signatory act, as only the signatory is able to reproduce the signature in this very form. And for him/her the signatory act bears the warning that he/she creates a possibly legally relevant document. The combination – the signed document – secures the integrity of the relevant information, as no one but the signatory is able to change the document and sign it again afterwards.

Electronic files may reproduce some of the functions, but not all of them, and not in the same way. Firstly, information can be kept in electronic files and can therefore without problems be worked with by different people, indeed, nearly everywhere at any time. It cannot, however, be perpetuated as well as on paper. The archiving of electronic information is a particular problem. While today it is not a problem to read medieval paper documents or even Egyptian papyrus, we already have great difficulties to read files saved ten years ago. Not only do we have little possibilities to find the appropriate hardware to read, for example, 8” floppy disks, it is already not sure we can find the equivalent software able to read, say, documents saved in the MS Word 5.0 format. Secondly, it is difficult to use an electronic file as a proof in »the real world«, as this requires a running computer and the possibility to present the document, a
requirement that is not often fulfilled. Thirdly, the same applies to the use of controlling function of paper: The controller must have the possibility to read the electronic files that are kept. Fourthly, the transport function is almost impossible to reproduce electronically, since electronic files are easily copied and there is literally never an original. Finally, electronic files do not convey the same amount of seriousness as paper documents. It is difficult to imagine that in the near future a minister will be appointed and at this occasion will receive a text message at his/her mobile phone instead of a paper document.

The functions of written signatures can be fulfilled by electronic signatures almost equally well. They can finalise a document, name the identity of the signatory, can only be produced by him/her and secure the integrity of the signed document even better than a signed paper document can. There are, however, some limitations to the warning function. The process of manually signing a deed is by far much more connected with binding oneself legally than it is with any statement sent out over the Internet.

This shows that it is not sufficient to require the use of electronic signatures in all cases where the law today requires the paper form. It is rather necessary to examine each form requirement and ask for the specific function this requirement shall fulfil, and whether this function is still necessary. The use of signature technology should not be forced for its own sake but rather set back for future applications. Since the technology is hardly known or spread, the costs of implementing this technology would be largely spent in vain, while the obligatory use of signatures would only alienate most citizens and hinder the introduction of E-Government.

6. Concepts

Though it sounds good to be the leader and the first one in a specific field, it is often better to follow the leaders and let others stumble, i.e. learn from the experience others have acquired. Therefore, the German experience shall be presented here, and this with regard to the law on E-Government itself as well as with regard to the process in which the law was made. Firstly, the European framework shall be outlined.

a) The European Framework

The European law sets only few boundaries to the Member States’ freedom to set their own laws on administrative procedures. Although the
Union has no competence to rule this area as a whole, there is still some influence. It derives from the fact that several directives setting material law also include procedural rules. They could hinder the introduction of E-Government in this specific area. One example is the waste framework directive 75/442/EEC that contains several inexplicit and some explicit form requirements that are not open to the electronic form.

Another important European influence is the signature directive 1999/93/EC. First: This directive does not require EU Member States to accept electronic signatures in all areas where now a manual signature is required. Article 5.1 requires EU Member States only to ensure that advanced electronic signatures satisfy the legal requirements of a signature in relation to data in electronic form in the same manner as a handwritten signature satisfies those requirements in relation to paper-based data. This means that only in those cases when a Member State allows electronic documents to fulfil form requirements it has to treat an electronic signature in the same manner as a manual signature. As long as paper documents are obligatory, electronically signed documents do not need to be accepted.

However, when electronic signatures are accepted as means of authorisation, EU Member States must ensure equal treatment of all qualified electronic signatures, regardless of where the certification service provider is established. Only in the public sector Member States may make the use of electronic signatures in the public sector subject to possible additional requirements, (Art. 3.7). Such requirements shall be objective, transparent, proportionate and non-discriminatory and shall relate only to the specific characteristics of the application concerned. Such requirements may not constitute an obstacle to cross-border services for citizens.

Given today’s signature technology, additional requirements are already set when public administration is able only to verify one or two of the many not interoperable signatures and technologies. By requiring these specific ones public administration discriminates against all other signatures and certificates. This additional requirement may be objective and non-discriminatory, as long as there are reasonable grounds for the specific choice, as for example the probable number of users. To be transparent, the choice must be made by the lawmaker, so that this special requirement is already clearly seen in the text of the law.

b) The German Law: Preparation and Legislation

In Germany, the General Law on Administrative Procedures was changed in 2002 in order to make E-Government possible. It took roughly two
years of discussion and preparation. All Bundesländer were involved as well as all ministries and agencies.

The scope of the legislation was defined first. It soon became clear that it was only necessary to regulate the field of transactions, as the internal use, communication and publication were already allowed under the former law. Administrative procedures generally require no special formal requirements; they have to be carried out simply, effectively and speedy (§ 10). Although public administration principally has the discretion to organise the procedures at its own discretion, it has no right to demand special formalities to be met by citizens as only the law may impose additional burdens on them. Yet, a less formal procedure is generally allowed. Public administration can, for example, gather information by any method it deems fitting, and utilise all means of proof it deems necessary to determine the facts of a case (§ 26). Therefore, electronic messages are allowed as well as oral or written ones.

Transactions, however, often required the paper form. Motions and administrative acts nearly always had to be in writing, which meant paper documents. Additionally, motions needed to be (manually) signed by citizens, while administrative acts only needed to name the responsible authority and civil servant. This requirement was not part of the General Law on Administrative Procedures, but part of hundreds, maybe even thousands material administrative laws and ordinances.

For that reason, a general approach was chosen. Since it seemed too complicated to change each and every form requirement, one comprehensive norm was created, allowing for electronic messages in all areas. The agencies and ministries were asked to examine the form requirements from their respective working areas, determine their form functions and suggest exceptions to the general rule. In accordance with that, a 20 pages long list of 71 articles was compiled. Some of the exceptions allow for all electronic messages regardless of signatures or certificates, while many others insist on the traditional paper form.

c) The German Law: Its Contents

The new law of 2002 has brought one new paragraph to the General Law on Administrative Procedures and changed two others. § 3a has been introduced, regulating three questions: When are electronic messages allowed? How can the traditional form requirements be fulfilled? And: How to deal with technical incompatibilities? § 37 has been changed, now al-
allowing for administrative acts in electronic form comparable to written ones. § 41 now includes an assumption as to when an electronic administrative act is delivered. The respective text is as follows:

§ 3a VwVfG. (1) Electronic documents can be transmitted insofar as the addressee has permitted this.

(2) The written form required by law can be substituted by electronic form, unless specified otherwise. For this, a qualified electronic signature has to be attached to the electronic document. Signatures based on certificates issued for a pseudonym that is not easily recognisable are not allowed.

(3) The public authority informs the sender of an electronic document about the technical specifications without delay when an electronic document is not suitable for editing. If a citizen claims an incompatibility, the public authority resends the document in a suitable form.

§ 37 VwVfG. (2) An administrative act can be issued in written, electronic, oral or any other form...

(3) A written or electronic administrative act must name the issuing authority... When the legally required form shall be substituted by the electronic form, also the certificate underlying the used signature has to name the issuing authority.

(4) For administrative acts the law can require electronic signatures that are long-term verifiable.

§ 41 VwVfG. (2) An electronic administrative act is assumed to be delivered the third day after being sent ...

This paper is hardly the place to discuss the regulation in detail. Therefore the following is restricted to some rather general remarks.

When introducing these regulations, the legislators in § 3a (1) answered one question already mentioned: Neither a citizen nor a government agency is forced to use the Internet as a means of communication. In § 3a (3) they deal with the problems of technical incompatibilities. These subparagraphs deliver adequate answers to relevant questions.

Far more problematic is the second subparagraph of § 3a. The question answered with this is twofold: How can form requirements be fulfilled by electronic means, and: How can the signature technology be implemented? They focused on the signature technology instead on the functions the form requirement fulfilled. By assuring themselves that electronic signatures fulfil most of the functions of the paper form, they have thrown together the form functions of paper as the information carrier and the
manual signature. As a result, the law now declares paper and its functions irrelevant as long as the electronic file is signed electronically. This neglects not only the differences between paper and signature, but also the fact that lately the written form has principally required only paper and no manual signature any more.

The third sentence of the second subparagraph, »Signatures based on certificates issued for a pseudonym that is not easily recognisable are not allowed«, is a masterpiece example on how not to make a law. The question that this sentence answers is hardly understandable. It has to do with the fact that under the German Signature Law only natural persons may be the owners of signature certificate while it seems preferable to have certificates issued to public authorities rather than to single civil servants who should rather stay anonymous. That is why the authorities should be allowed to use pseudonymous certificates. For example, this pseudonymous certificate of, say, »the city of Munich«, is issued to a civil servant of the town’s administration. Citizens should not be allowed to use this possibility; for fear of public administration being flooded with fake applications. The answer given is wrong in three ways: The first problem should have been solved where it has arisen, by adding the possibility of certificates issued to public authorities to the Signature Law. The second problem does not exist, the number of fake applications is minimal, and if they exist they can even now be discarded without formality. And thirdly, the wording is unclear: When is a pseudonym »easily recognisable«? A long litigation history will be needed before the drawing line is clear again and the formality again becomes what it has been for a long time: an easily used tool for the sender as well as for the receiver to determine whether the form functions are fulfilled.

§ 37 (4) only requires the remark that this subparagraph only opens the possibility for other regulations to require long-term verifiable electronic signatures. The law does not say what »long-term« means in this respect, but the legislators have explained that they meant 30 years to be long enough time. In this case, the so called accredited signatures would be required. Until now, there have only been a few norms that require long-term verifiable electronic signatures. In most cases the law does not permit electronic messages at all largely because the problem of how to perpetuate electronic files over long time is still unsolved, regardless of the signature in question.

The answer in § 41 (2), that an electronic administrative act is assumed to be delivered the third day after being sent, is modelled after the equivalent rule concerning letters. It neglects the still-existing difference between
letters and e-mails with regard to how often the respective inboxes or letterboxes are emptied by the citizen. While it can be regarded as common that a letterbox is emptied every day, this cannot be said for e-mail inboxes, at least not in the private field. There are only few citizens who check their e-mail accounts more than twice a week. With regard to this assumption, only the users who are able and willing to read their e-mails daily can be regarded as having permitted electronic communication.

As we could see, the new law does answer some relevant questions in an adequate manner, and it does answer some irrelevant questions. It does, however, leave some questions open, as well. Some of them are: Where can legal form requirements be loosened? How can electronic messages be served in a legally binding way? What follow-up costs are to be borne by public administration when it decides to implement e-government techniques? How can hierarchical responsibility and an effective court control be secured, when an important part of the information processed by public administration is saved only in electronic form? When it comes to electronic signatures, it does not provide sufficient regulation for public administration’s certification infrastructure. In my opinion, it is not permissible to use private organisations for this crucial task, but it is necessary to build up a public certification service provider.

7. Recommendations

There are two major suggestions to make, one regarding the law-making process and the other concerning the contents of the law.

When determining the scope of the planned E-Government regulation – regardless whether it is internal use, publication, communication or transactions that should be regulated, and which material areas should and shouldn’t be regulated – all agencies that are afterwards actually going to work with the future law should be already integrated in the process. They are a valuable source on what form requirements are still necessary, which of them are no longer needed, where it is recommendable to let go of all formalities, and where it seems most fitting to stick to the traditional ways.

When it comes to formal requirements from electronic messages, it is most advisable to avoid electronic signatures for as long as possible. The costs of this technology, both for public administration and for citizens, are very high. Unless the benefits are proved, they are too high. Even in the areas where authentication of electronic messages is really necessary,
the private branch can easily do without them. Online stores like amazon.com or lufthansa.com use passwords and the banking infrastructure, i.e. credit cards. Banks use passwords, more or less, when requiring PINs and TANs – personal identification numbers and transaction authentication numbers. It is cheap, it is reliable, it is fail-safe, and it is court-proof. If banks can work with it, public authorities should be able to do so as well, it seems.