BNotK
BUNDESNOTARKAMMER

XXIV International Congress of the International Union of Latin Notaries Mexico City 2004

Topic II: The role of the Notary in electronic contracts

Report by the German delegation

Sigrun Erber-Faller, Notary
Hallhof 6
87700 Memmingen

Date: 14 April 2004

Table of Contents

A. Foreword

The XX International Congress of the International Union of Latin Notaries held in Cartagena, Columbia, from 27 April to 2 May 1992 was the first time that the agenda for consideration by international notaries included, under the heading of "Computerised Documents and Legal Certainty", the issue of **the effects that new information and communications technologies will have on notarised documents and their status in law**.

The German notary who reported on this topic at the time, Jörg Bettendorf, examined[1] various aspects, such as the very concept of an electronic document, its particular risks, computerised documents as private deeds, electronic documents and the services of notaries and the remote conclusion of contracts. In his conclusion he stated that, as the law then stood, the use of computerised documents was **only possible for legal transactions that did not have to be conducted in a particular form** and that, under the law of evidence, computerised documents were governed by the **principles of free appraisal of evidence**. He considered the introduction of electronic documents in the formal area of the law to be feasible only if additional technical safeguards were introduced, such as an **"electronic signature",** and pointed out this would necessitate coordination between computer experts and lawmakers and that embodiment in a certification hierarchy would be required. Under the law of evidence he considered it possible to **equate electronic documents with private deeds,** whilst from the substantive-law point of view he maintained his reservations about their equal status because of the difficulties encountered in tracing electronic signatures back to the signatory with sufficient certainty in the absence of individual distinguishing features. He also referred to the problems of unauthorised creation and mailing of electronic documents, their susceptibility to interference, proof of receipt, maintenance of confidentiality and protection against acts of sabotage. In order to make meaningful use of the opportunities afforded by modern technology he thought it necessary for a **safety standard** to be developed along traditional lines.

Twelve years have now elapsed. There have been huge developments in the law on electronic signatures[2], electronic documents and electronic communication in Germany since then. In 1992 there were no specific rules on electronic documents under either civil or procedural law; there was no *Signaturgesetz* [Law on Signatures] and not even any European law on this subject. Although the technology required for electronic signatures was certainly known to exist, it was only being used for coding purposes within the military and security services. Suggestions that a general certification infrastructure be set up and efficient asymmetrical encrypting procedures made available to all, to enable secure electronic signatures to be created and data to be encoded so as to provide a confidential communication process, were met with misgivings on the part of government officials. However, as usual, once there is an idea for a product plus the appropriate technology, together with a prospect of sufficient demand, it is impossible to stem the rise of progress amongst free-market systems. Bettendorf's paper to the XX U.I.N.L Congress conceived of such a development and greatly stimulated discussion of associated legal issues. The objective of this paper will be to report on the **current position** and possible **future developments**.

---

[1] Published in: XX. International Congress of the International Union of Latin Notaries, Cartagena, Colombia, 27.4.-2.5.1992, reports of the German delegation, published by the *Bundesnotarkammer*.

[2] The terms "digital" and "electronic" signature will be used below synonymously.

B. Computer use and digital signature procedures

I. Available statistics

As far as we can see, there are currently no official statistics available on certain aspects of the information society that are any more up to date than those for the years 2000 to 2002.

1. Private households

a) Internet access

The Eurostat Yearbook 2003[3] compares Internet penetration amongst households with Internet access for the years 2000 and 2001. It puts penetration in 2000 across the EU at approximately 19 percent, with variations of between 6 and 48 percent, the figure for Germany being approximately 12 percent. By 2001 some 36 percent of all households across the EU had Internet access. The figure ranged from 11 to 64 percent. In Germany the figure for 2001 was approximately 38 percent. The *Statistische Bundesamt* (German Federal Statistics Office)[4] said in its press release of 6 February 2003 that approximately 16 million households (in Germany) had Internet access in the first quarter of 2002. This represents a proportion of 43 percent. Hence, in 2002, Germany was slightly above the EU average of 40 percent but still below that of leading EU countries.

b) PC penetration

According to the *Statistische Bundesamt* press release, PC penetration for the first quarter of 2002 was 55 percent, with 92 percent of all households with Internet access using their PCs, amongst other things, as a means of accessing the Internet. Laptops only accounted for 15 percent here and mobiles for just 8 percent, although more than one answer was possible.

c) Social aspects

The presence of Internet access is linked to income: 77 percent of households with a net monthly income of more than € 3,600 had an Internet connection in 2002 but only 24 percent in the income group of less than € 1,300 had a connection. What is more, more men than women used the Internet, more young people than older people, and more people with a high level of education than people with less education.

d) Objectives of Internet usage

In 2002 the Internet was principally used to send and receive e-mails (75 percent), to search for information on products and services (65 percent) and to carry out research for school or studies (42 percent). e-government usage accounted for 26 percent, with only 12 percent downloading forms and just 6 percent returning the completed forms to the authorities again by Internet. 22 percent also used the Internet to work at home.

e) e-Commerce

45 percent of Internet users aged 10 years and above and 51 percent of adult Internet users bought products online in 2002, with books and magazines, followed by clothing and sports items, being preferred to audio and video recordings, software, hardware and electronic products. Internet users who did not want to buy online gave misgivings as their reasons, e.g.

---

[3] The following Eurostat data is taken from the website for Germany http://www.eu-datashop.de .

[4] The data from the *Statistische Bundesamt* quoted below comes from its website http://www.destatis.de.

reservations about security when paying by credit card, fear of personal details being misused, doubts about the process of making complaints and reservations concerning terms of delivery and the right to return purchases.

2. Businesses

a) Internet access

The EU statistics for 2001 show average Internet penetration amongst businesses to be somewhat in excess of 70 percent. This review does not include figures for Germany. The variation in this sector between countries in Europe ranges from 50 to 90 percent. The *Statistische Bundesamt* reported for 2002 that 71 percent of German businesses used the Internet for their business transactions, varying between 76% in the processing industry, 63% in commerce and the hotel trade and 78% in the services sector.

b) Technical facilities

In the case of businesses employing 20 people or more it was established, for 2002, that computers were used everywhere, no matter what the sector. Almost all large businesses used the Internet and were contactable by e-mail. The figure for businesses employing less than 20 staff was just below 60 percent. More than every second employee had a computer workstation and half of these had Internet access, with the proportion of computer workstations in data processing businesses and in research and development reaching more than 90 percent.

c) Objectives of Internet/Intranet usage

Small businesses used the Internet for online banking purposes, whilst in large businesses the aim was to obtain information and observe the market. Intranets were principally installed by large concerns: 84 percent of businesses with more than 250 employees had an Intranet facility in 2002, and more than 15 percent of small businesses. Almost one-third of businesses had a home page or website, whilst the figure for large firms with more than 250 employees was almost 90 percent.

d) e-Commerce

In 2002 the Internet was only used as a market place by 8 percent of firms. 90 percent of the clientele came from Germany. 24 percent of businesses used the Internet in connection with the procurement of goods and services but mainly only to obtain information. The proportion of goods and services ordered over the Internet was, in fact, just one percent. Sales and expenditure on goods and services were two to three times higher on other networks (e.g. EDI) than for Internet trading.

3. Conclusions in relation to the use of digital signature procedures

Since all of the aforementioned applications are **possible without any digital signature procedure** and since no statistics are available on the penetration and use of digital signature/security technologies in general commercial life or within the administration, it must be concluded that this area of technology has not yet, in practice, achieved the significance that it really deserves.[5] One main reason for this might be that legal transactions

[5] See the Resolution of the Council of the EU of 18 February 2003, OJ 28.2.2003 C 48/8 on the implementation of the eEurope 2005 Action Plan, which cites at the beginning the documents already produced by the Council and Commission in this connection and the Annex of which contains general guidelines for the benchmarking

that require written form, in particular, are not yet being conducted and concluded electronically in significant quantities even though the necessary legal framework has already been created, as described below. Where there are no requirements as to form, however, it is apparent that **security risks** are still being **underestimated**.

II. National legislation; projects and activities on the part of notaries

1. Legislation

One way in which the State fosters electronic transactions is through legislation. The framework required for this purpose has now been set up, initially comprising the technical guidelines contained in the Federal Government's *Signaturgesetz* and *Signaturverordnung* [Regulation on Signatures] (of 1997 and 2001 respectively) – see below under C – followed by the amendments to civil and procedural law contained in the (Federal) *Gesetz zur Anpassung der Formvorschriften des Privatrechts und anderer Vorschriften an den modernen Rechtsgeschäftsverkehr* [Law on the Amendment of Provisions of Form in Private Law and Other Provisions in Line with Modern Transaction Methods] (of 2001) – see below under D – and, finally, the rules on electronic acts of administration contained in the federal *Drittes Gesetz zur Änderung verwaltungsverfahrensrechtlicher Vorschriften* [Third Law Amending Provisions of Administrative Procedure] (of 2002) and parallel laws passed by the individual provinces. Electronic acts of administration do not come within the scope of this report.[6]

2. Federal projects

Another means by which the State can provide support is by developing future technology through projects on fields of application.

The Federal Government is ambitious in its aim to foster the information society in Germany. Following on from the European Union's eEurope 2005 Action Plan,[7] the first thing to be set up was the BundOnline 2005 initiative.[8] In the meantime the Federal Government has also presented its "*Aktionsprogramm Informationsgesellschaft Deutschland 2006*" [Information Society Action Programme Germany 2006].[9] It is established in a corresponding document published by the *Bundesministerium für Bildung und Forschung* [Federal Ministry of Education and Research] that, according to the World Economic Forum, Germany has improved its ranking amongst IT countries from position 17 last year to its present 10th position. The aim is to keep pressing on upwards. Specific aims by 2006 encompass the areas of **the digital economy, research and technological development, education, e-**

---

exercise and draft list of benchmarking indicators for the Action Plan, one of the major elements of which would appear to be *inter alia* a secure information infrastructure.

[6] It is not immaterial, however, that the fundamental reference to written form under the German Civil Code already contained in administrative legislation as regards administrative measures that have to be pronounced in writing has been applied to documents in electronic form. Where the authorities act under contracts governed by public law rather than by way of administrative measures, no specific mention of such contracts is made here because the issues concerning § 126 (a) BGB the subject of this report apply *mutatis mutandis* to contracts governed by public law.

[7] See footnote 5.

[8] Further information available at http://www.bund.de/BundOnline-2005-6164.htm;

[9] The full text of the action programme can be found on the *Bundesministerium für Bildung und Forschung* website *http://www.bmbf.de*

government, digital signatures, e-health and IT security. It is proposed, for example, to increase Internet usage to 75 percent of the population, to achieve comprehensive e-business use by at least 40 percent of small and medium-sized enterprises, to have 50% of Deutschland-Online projects implemented by the federal, provincial and municipal authorities, to offer all of the Federal Government's 440 Internet services online, to conduct the Federal Government's entire tendering process electronically, to issue bank cards with a digital signature function and to develop digital identity cards.

In the e-government sector alone, encompassing federal, provincial and municipal authorities, the Federal Government is investing 1.65 billion euros.

As already mentioned, there is already a legal framework in existence covering electronic administrative measures at federal level: the Federal *Verwaltungsverfahrensgesetz* [Administrative Procedure Act, the "VwVfG"] and other administrative laws were amended by the *Drittes Gesetz zur Änderung verwaltungsverfahrensrechtlicher Vorschriften* of 21 August 2002 and then promulgated anew.[10] In provisions such as § 3 (a) VwVfG the legislature has introduced the possibility of replacing written form with electronic form and in § 34 (a) it has introduced the possibility of electronic administrative certification.

3. Provincial projects

The individual provinces have also developed their own e-government concepts and are working especially closely here with the municipal authorities. By installing modern ICT facilities it should be possible to **create a "digital" administration** and make much physical contact with authorities superfluous in the future. As with federal authorities, the first stage of e-government consists of the general presentation of information that can be accessed and retrieved without any security problem. Almost all provinces and municipal authorities have now got such facilities and are offering them to the population on their web pages. These not only give details of opening hours for swimming pools but also, for example, enable specific forms to be downloaded from a virtual town hall.

The provision of real online services, such as filing an application, for example, presents the same difficulties as those experienced at federal level. However, there are already numerous examples at provincial level: in Bremen, it is possible to report meter readings to utility companies or request a marriage certificate from the register office using an electronic signature. The authority in Esslingen offers digital signature holders a facility to register online for a dog licence or apply online for planning permission. In Nuremberg, it is possible to apply for a resident's parking permit on the Internet.

One example of procedure at provincial level is the Bavarian provincial government's e-government programme of 16 July 2002.[11] This contains a description of two central spheres of action: firstly, presentation **of electronic administrative services** to the public and, secondly, **improvement of the administration's internal structure**. Electronic signature procedures are expressly mentioned in this context, with a programme for their introduction having been drawn up in conjunction with the Ministry of the Interior.[12] Qualified **electronic signatures** are proposed there, in particular, for areas in which **the administration's actions**

---

[10] BGBl. I, 102 et seq.

[11] The document and a review of projects are available on the Bavarian provincial government's website at http://www.bayern.de

[12] This programme is also available on the Bavarian provincial government's website.

are bound by requirements in relation to form. The Bavarian provincial government's website describes 62 projects in the e-government sphere that have either already been carried out or are still pending, the most interesting of which – as far as notaries are concerned – are the electronic property plan, electronic dealings with the courts, electronic tax returns and the retrieval of data from the land register and commercial register by electronic means.

Here too, the legal basis for electronic acts of administration already exists. The *Gesetz zur Stärkung elektronischer Verwaltungstätigkeiten* [Law on the Promotion of Electronic Administrative Activities] was passed on 24 December 2002 and published in the Bavarian *Gesetz- und Verordnungsblatt* [Gazette of Laws and Regulations] on 31 December 2002.[13] This meant that the legal rules required for pronouncement of electronic acts of administration under provincial law were introduced into the Bavarian*Verwaltungsverfahrensgesetz* [Law on Administrative Procedure], in particular, as well as into certain other administrative laws.

4. Action taken by the notarial profession

The above review of statistical data and achievements in both economic and administrative areas at federal and provincial level should not obscure the fact that it was neither commerce nor the State that led the way in the legal foundation of electronic legal transactions. The **need for secure reliable communication** was recognised, first of all, by the **notarial profession** and then by our colleagues in other professions. It was then not electronic administrative dealings that were uppermost in mind, but the **shaping of relationships under private law**.

Following on from the XX U.I.N.L. Congress, the *Bundesnotarkammer's* [Federal Chamber of Notaries] **Electronic Legal Transactions Project** had, by 1992, already completed the groundwork of a development that ultimately led to the introduction of electronic form as the equivalent of written form in the German Civil Code ("BGB") and to special rules on electronic documents in the Code of Civil Procedure ("ZPO").

In 1993, 1995 and 1997, specialised interdisciplinary encounters, chiefly spearheaded by the *Bundesnotarkammer,* took place under the title of the **"Electronic Legal Transactions Forum"**, the objective of which was to concentrate the minds of the legislature, national authorities, commerce and science on the problem and to raise awareness of digital signatures as a means of shaping the law.

The *Bundesnotarkammer* consciously sought, through different working groups, to collaborate with representatives from industry, umbrella organisations and the administration on the introduction of its ideas in the form of widely ranging solutions.

In 1995, the *Bundesnotarkammer*, in conjunction with the Saxon and Bavarian Provincial Ministries of Justice, began a **pilot project to introduce electronic legal transactions to land registration**.

In 1997, the first *Signaturgesetz* became law, incorporating the proposals contained in the 1995 ***Gesetz über den elektronischen Rechtsverkehr*** **[Law on electronic legal transactions] drafted by the *Bundesnotarkammer*.** The second *Signaturgesetz* came into force in 2001 based on experience with the first *Signaturgesetz,* the EU Digital Signatures Directive and the

[13] GVBl. 962.

principles embodied in it. The main ideas behind the original law had been incorporated in the directive, however, and therefore also found expression in the new *Signaturgesetz*. The "licensed" (now "accredited") certification authorities are one example of this.

In 2001, as a result of the *Gesetz zur Anpassung der Formvorschriften des Privatrechts und anderer Vorschriften an den modernen Rechtsgeschäftsverkehr,* electronic form was introduced as the fundamental equivalent of written form in the Civil Code, with the provision in question making reference to the *Signaturgesetz*. The model for the provision was taken from the aforementioned ***Gesetz über den elektronischen Rechtsverkehr*** drafted by the *Bundesnotarkammer*. An "advanced electronic signature" within the meaning of the EU directive is sufficient for a digital signature to correspond to written form.

Notarial form was initially unaffected by the changes. However, a *Bundesnotarkammer* working party is already looking into the development of appropriate legislative proposals. These have recently been incorporated in a green paper on a Justizkommunikationsgesetz published by the Federal Ministry of Justice making provision for **electronic certification**. There should not be anything to prevent the electronic transmission of notarised deeds to the **Land Registry** or **Commercial Registry**, for example, from taking place in the foreseeable future - at least legally speaking.

The aforementioned laws and legislative scrutiny, both of which have been greatly influenced by the German notarial profession, will now be considered in detail.

C. Legal principles underlying the security infrastructure

I. Technical basis of electronic signatures

We do not intend here to look once again in detail at the question of the **functioning of electronic signatures**. There are already numerous publications dealing with this aspect of the matter.[14] The U.I.N.L. committees have also already gone into this side of things in great detail.[15]

Digital signatures are based on **asymmetrical cryptographic procedures**. Using a secretly held private key, the digital signature is produced by way of a complex mathematical process in such a way that it is inseparably linked to the digitally signed data. It is verified using a public key available through a generally accessible register. The holder of the pair of keys is then issued with a certificate that can also be checked from a publicly accessible register, from which it is possible to confirm the identity of the signatory. The production of keys and keeping of registers are the responsibility of the certification authority.

---

[14] See, as one example of many: Reisen/Mrugalla, Digitale Signaturen – Prinzip und Sicherheitsinfrastruktur and Bieser, Das Signaturgesetz – Die gesetzliche digitale Signatur unter rechtlichen und praktischen Aspekten, both papers published in: Erber-Faller (publisher), Electronischer Rechtsverkehr**.**

[15] The U.I.N.L. members' meeting in October 1998 in Buenos Aires, Argentina, ratified a working paper and passed a resolution, which was then forwarded to all member notaries. It also went in detail into the way in which digital signatures worked and their possible effects on notaries. At the meetings of the standing committee and members' meeting of the U.I.N.L. in Quebec, Canada, at the beginning of October 2003, the "Policy for certification of electronic signatures by notaries in Member States of the U.I.N.L.", proposed by the Commission on Computerisation and Legal Certainty, was approved and the commission was instructed to continue working on it.

Knowledge of these matters will be presumed for the purposes of the following report.

II. The *Signaturgesetz* and *Signaturverordnung*

1. Reference for electronic form to the *Signaturgesetz*

Contracts in Germany can be concluded, **in principle, without any requirements as to form**. Where statute provides that a specific form should be used for the conclusion of a contract, in most cases this will be **written form** pursuant to § 126 BGB *[German Civil Code]*. Ever since the *Gesetz zur Anpassung der Formvorschriften des Privatrechts und anderer Vorschriften an den modernen Rechtsgeschäftsverkehr* was passed on 13 July 2001[16] the BGB has recognised the new **electronic form** brought in under § 126 (a) BGB as the equivalent of written form. In order to comply with electronic form "the party making the declaration must add his name to it and affix to the electronic document a qualified electronic signature under the *Signaturgesetz*. In the case of a contract the parties must each electronically sign an identically worded document in the manner stipulated in paragraph 1." **Text form** in § 126(b), another addition to the law, does not demand such safeguards and is therefore not recognised as the equivalent of written form. Detailed mention of this form and of the higher forms of notarial certification and authentication will be made below.

Electronic form is therefore only attainable under civil law by reference to the *Signaturgesetz*.

2. The *Signaturgesetz* as the administrative framework for digital signatures and security infrastructure

a) Historical background

The *Signaturgesetz* first came into force on 1.8.1997. The *Signaturverordnung* then followed on 1.11.1997 with supplementary provisions. Germany was therefore one of the first countries in Europe – and even the whole world – to have such rules. As a result of further discussion, particularly at European level, and the adoption of the European Digital Signatures Directive, the *Signaturgesetz* and *Signaturverordnung* were amended to take account of experience gained in practice and the principles embodied in the directive. The current version of the *Signaturgesetz* came into force on 22.5.2001 as the "*Gesetz über Rahmenbedingungen für elektronische Signaturen"* [Law on Framework Conditions for Electronic Signatures][17] and the new *Signaturverordnung* was brought in on 16 November 2001.[18]

b) Scope of application

§ 1 (2) of the *Signaturgesetz* expressly states that the **application of digital signatures is optional** unless electronic signatures **are specifically required by statute.** Such provisions include, for example, the aforementioned § 126 (a) BGB in the case of electronic form, which will be discussed in more detail below, and the aforementioned laws on administrative procedure or special administrative laws in the case of electronic acts of administration.

c) Certification infrastructure

---

[16] Published at BGBl. I. 1542.
[17] BGBl. I. 876.
[18] BGBl. I. 3074

The second part of the *Signaturgesetz* is devoted to the activities of certification authorities, referred to in the Act as **"certification-service-providers"**. Such activities are basically **approval-exempt** in Germany. However, having regard to the fact that the security of an electronic signature essentially depends upon the security of the activities of the certification authority, § 4 (2) of the *Signaturgesetz* requires of the service provider the reliability and expertise needed for the operation of a certification service, contingency cover (third-party liability insurance) and other essentials. "Reliability" means that a party, as a certification-service-provider, offers an assurance of compliance with the legal provisions relevant to that operation. When establishing "expertise", account is to be taken of the people working in the operation. The other conditions are fulfilled if proof of compliance with the *Signaturgesetz* and the *Signaturverordnung* emerges from a security strategy.

d) Virtual certification authorities

In contrast to its predecessor, the new *Signaturgesetz* permits the creation of "virtual certification authorities". § 4 (5) allows a certification-service-provider to **assign "… duties … to third parties** by including them in its security strategy…" The *Bundesnotarkammer* makes use of this provision, for instance. It itself is an accredited certification-service-provider but the technology is provided by Deutsche Post eBusiness GmbH.

e) Identification

The issue of qualified certificates requires reliable identification of the parties applying for those certificates, otherwise the **allocation of digital signatures** to the (actual or alleged) signatory will later be jeopardised. A qualified certificate may include professional or other **data on persons (attributes)**. If a professional characteristic is certified it will be necessary to consider this again during the course of certification by professional organisations as this forms the **legal basis of electronic notarial identification**.

f) The concept of a qualified certificate

A qualified certificate has to be digitally signed with a qualified electronic signature; its content is defined by law as including, in particular, the name of the digital signature key holder, the digital signature verification key allocated to him, the underlying algorithms, the current certificate number, the validity period of the certificate, the name of the issuing certificate-service-provider, details of any restriction on the use of the digital signature key, its designation as a qualified certificate and any attributes.

g) The certification authority's obligations in the case of qualified certificates

Qualified certificates must be immediately **discontinued** by the certification-service-provider if the signature key holder or his representative so require, if the service provider ceases operation without it being continued by another provider, or if the supervisory authority orders them to be discontinued. The appropriate professional organisation may also require discontinuation in the case of professional attributes.

h) Documentation duties and liability

The certification-service-provider must document all stipulated security measures in such a way that data and genuineness **can be checked at any time** and that documentation **cannot be clandestinely amended at a later date**. The service provider is responsible for ensuring that his products and services conform to legal requirements and work properly. Cover for this risk is available in the form of the aforementioned third-party liability insurance in the minimum sum of € 250,000 per claim.

i) Cessation of a certification authority's activities

Where a certification-service-provider ceases his activities he must **report** this to the supervisory authority and ensure that his certificates are **taken over** by another provider. Otherwise he must **discontinue** them.

j) Voluntary accreditation
In addition to the above requirements applicable to all certification-service-providers, there is also the possibility of voluntary accreditation. Accreditation is a **legal right** where the service provider can prove compliance with the provisions of the *Signaturgesetz* and *Signaturverordnung*. A **seal of quality** is granted on accreditation. It may be used in advertising in competition with non-accredited service providers. Accreditation is only given once the suitability and practical implementation of security strategy have been comprehensively investigated and confirmed.

k) The duties of the "root CA" (Certification Authority)
Accredited certification-service-providers receive their certificates from the "competent authority", that is to say, the postal and telecommunications regulatory authority in Bonn, the so-called "root CA". This authority publishes on its home page[19] the names and addresses of, and communication links with, accredited certification-service-providers, information on the revocation or withdrawal of accreditation, on qualified certificates issued by it and their discontinuation and (where appropriate) on any cessation of or prohibition on the operation of an accredited certification-service-provider. In the area of certification by the root CA, therefore, there is no need for so-called "cross certification" with all its attendant problems in proving the trustworthiness of the certification authorities involved. In the root CA area and that of the certification-service-providers that derive their certificates from the root CA the State accepts direct responsibility for the monitoring of quality and standards.

In the accredited sector the **certification infrastructure** is necessarily a **two-stage procedure** (root CA/accredited certification authority) because of the principles described above. As there is an absence of such principles in (just) the qualified sector, it is now possible under the new *Signaturgesetz,* unlike under its predecessor, for there to be **multi-stage certification infrastructures**.

By using an accredited certification-service-provider, therefore, it is possible to achieve not only a **very high degree of security** in the products and services used but also an unbroken chain of highly secure certificates.

l) Foreign electronic signatures and products for electronic signatures
The *Signaturgesetz* assumes that digital signatures from the European Union and the European Economic Area **are of equal standing** if they comply with the principles enshrined in the Digital Signatures Directive. Digital signatures from third countries are deemed to be equivalent if the certificate "is issued as a qualified certificate and designed for an electronic signature… (within the meaning of the directive) …" and if the certification-service-provider is also accredited in a EU or EEA State, if a certification-service-provider in conformity with the directive and situated within the EU vouches for the certificate or if the certificate is recognised under a bilateral or multilateral agreement between the European Union and the third country or an international organisation.

m) Areas of application of qualified and accredited signatures

[19] http://www.regtp.de

It was a much disputed political decision by the legislature, taken not least of all against the background of the European Digital Signatures Directive, to let qualified digital signatures adequately constitute electronic signatures in the case of electronic form under § 126 (a) BGB. However, qualified signatures are not enough for the professional governing bodies because of known gaps in security, even though they might be tolerated by the EU for economic reasons. They use products and services from accredited certification authorities for their purposes, as can immediately be established from the website of the postal and telecommunications regulatory authority. The **list of accredited certification-service-providers** published there shows that Produktzentrum Telesec der Deutschen Telekom AG had been approved as the first certification authority under the old ***Signaturgesetz*** by 22 December 1998,[20] followed by Deutsche Post Signtrust (23 February 2000) and the *Bundesnotarkammer* (14 December 2000). Deutsche Post eBusiness GmbH, (formerly Deutsche Post Signtrust), Datev eG (the governing body for the tax consultancy sector), and the tax consultancy bodies in Nuremberg, Bremen and Saarland were also approved under the old law.

There are now a total of 23 accredited certification-service-providers. This figure takes into account the fact that one accreditation – as yet the only one – was withdrawn in 2003. Of the remaining service providers, 18 are professional organisations in the notarial, tax consultancy and legal sectors. Only the remaining five come from the true commercial sector.

D. Legal principles underlying the conclusion of contracts by electronic means

I. Preliminary note to the *Formvorschriftengesetz* [Law on Provisions of Form]

By its *Gesetz zur Anpassung der Formvorschriften des Privatrechts und anderer Vorschriften an den modernen Rechtsgeschäftsverkehr* (hereinafter, the "*Formvorschriftengesetz*" [Law on Provisions of Form] the legislature wanted to bring German private law into line with developments in modern legal transactions, developments in the ICT field and with the EU directives of 13 December 1999 on a Community framework for electronic signatures and of 8 June 2000 on electronic commerce.[21]

The Act makes amendments to the General Part of the Civil Code and to the law of contract, other civil legislation, the Code of Civil Procedure and other procedural codes (including codes that come within the non-contentious jurisdiction sector) and, finally, individual provisions from other areas of public law that make reference to provisions of form. The **central features** of the Act are the **introduction of electronic form** into the Civil Code on a par with written form and the introduction of the lower-ranking **text form**, which will be gone into below, together with the handling of electronic documents in the context of codes of judicial procedure and the adducing of evidence using electronically signed documents, which form the subject of Part E of this report.[22]

---

[20] The first *Signaturgesetz* did not make provision for a voluntary accreditation procedure and only enabled an application to be made for approval. Having regard to that same profile the new *Signaturgesetz* contains a transitional provision by which former approvals are deemed accreditation.

[21] See the official statement of reasons for the Bill, BT-Drs. 14/4987, 1.

[22] See the official statement of reasons, BT-Drs 14/4987, 1.

The problem of **"opposabilité"** (effectiveness against third parties) did not have to be resolved in German law because it is not possible here to conclude a legal transaction without complying with the requisite form so that it only takes effect *inter partes* and cannot be relied upon as against others. A legal transaction for which a particular form is required will either be concluded in that form so that it is effective *inter omnes* or will be completely invalid. This is compatible with the fundamental constitutive effect of entry in the land register or commercial registry. Issues of this nature will not therefore be gone into below.

II. General remarks

1. Modern means of concluding contracts

The technical diversity of modern working methods and means of communication is reflected in the manner in which, in modern legal transactions, declarations of intent are made, contracts concluded and subsequent rights enforced. Telephone, fax and e-mail cannot be ignored in legal or commercial life. They have even engaged the attention of the courts for some considerable time in practice.[23] Their use as a matter of course in individual transactions and commerce generally, the increasing displacement of paper as a means of communication and documentation in legally relevant fields and subsequent essential concentration by jurisprudence and case-law on the doctrinal classification of such declarations of intent have all contributed to greater recognition of the special nature of unwritten forms of declaration in legal transactions and of the difficulty of adducing evidence using them.[24]

2. Problems

The very things that have always been apparent with verbal declarations – that is to say, their ease of use and low cost, on the one hand, and their fleeting nature, susceptibility to interference and dispute, particularly as regards the uncertainty of the creator, on the other – have increasingly been seen as a problem of modern forms of communication other than traditional written form.[25] Where declarations are made in this way the litigation risks are stacked against those who rely upon them.

---

[23] The uncertainty that has arisen as a result of the differing case-law of the various courts, namely as to whether a scanned signature satisfies written form in the case of written pleadings, was avoided by the Joint Senate of the Supreme Federal Court in its order of 5.4.2000, although by allowing it, however, it did ultimately distance itself from the general written form stated in the BGB. The decision makes it clear that, the legislature apart, the courts have become more receptive to electronic communication, although without dealing with the security issues raised in former practice and also the subject of the *Formvorschriftengesetz*. This has been welcomed in practice, see *Lewinska* and *Rőmermann/van der Moolen*.

[24] The dissertation by *Kuhn* describes, with extensive support, the stage reached in debate about electronic transactions before beginning to discuss an electronic form and his own approaches to a solution. The dissertation by *Rapp* also investigates the suitability of electronic signatures to ensure standards of form by conducting a comprehensive evaluation of case-law and academic literature against the background of the *Formvorschriftengesetz*, including aspects of European and comparative law.

[25] The conference arranged by the *Bundesnotarkammer* and TeleTrusT Deutschland e.V. on 18./19.11.1993 on "Electronic Legal Transactions – Digital Signature Procedures and Framework Conditions", which is documented as a conference volume, vividly demonstrated this in joint papers submitted by a technical expert and a lawyer.

3. Technical organisational principles underlying a solution

The problems of declarations that are not embodied in physical form have long been debated by technical experts and lawyers.[26] It is therefore not so very remarkable that technical progress should have sought means to eradicate known weaknesses[27] when case-law has found it difficult to deal with cases of this kind on the basis of the laws applicable, so that the courts have sometimes pronounced judgments in individual cases that are barely comprehensible.[28] What is surprising, in fact, is that even at a relatively early stage a wide interdisciplinary dialogue involving scientists with different expertise, politics and the administration, industry and trade, governing bodies, consumer associations and other interested parties should have succeeded in creating the basis for a general approach to a solution.

Hopes were soon pinned on digital signatures resolving all kinds of technical and legal problems associated with modern information and communication technology. Definition, design and organisational aspects are governed by the *Signaturgesetz*[29] and the *Signaturverordnung*[30] already mentioned under C, as a result of which it is possible that, by referring to them, all different kinds of legislation could incorporate provisions that require a digital signature.

4. Consequences in relation to provisions on form

The *Formvorschriftengesetz* makes the **qualified electronic signature the essential feature of the newly created electronic form.** In the case of text form, also newly created, it deliberately dispenses with a comparable security feature. In this way the Act creates the basis of a doctrine that distinguishes between declarations of intent not made verbally or not embodied in paper form, consequent procedural action and the appraisal of evidence by means of such declarations. Classic written form and qualified written forms of official certification and notarial authentication, as well as certain special provisions,[31] are not affected by the Act.

III. Individual issues

1. The significance of the Act

The introduction of new forms of declaration in the BGB constitutes a milestone in legal development, the legal significance of which cannot be over-estimated. Until now, there was just the informal – not specifically regulated – declaration and written form in its various expressions. The electronic declaration only had a place in the informal sector – irrespective of how costly its security. There is now an **electronic equivalent to written form**.

---

[26] *Fritzsche/Malzer, Kuhn* and references cited there.
[27] The procedures dealt with in Part C were developed in this context.
[28] See footnote 23 above with regard to written pleadings; case-law was less prepared to compromise with regard to formal requirements of substantive law, see BGH 121, 224, according to which despatch by fax is not sufficient "submission in writing" in the case of a deed of guarantee under § 766 BGB.
[29] See in particular the comment by *Roßnagel* in Recht der Multimediadienste (Law on Multi-Media Services).
[30] *Roßnagel* loc. cit.
[31] e.g. the conveyance of property § 925 BGB or handwritten wills, § 2247 BGB,

Just as before, written form comprises certain essential functions against which the new electronic form and text form are to be gauged. The fundamental equal status of written form and electronic form was therefore preceded by a profound debate on **functional equivalence**.[32]

The reasons why the Act has not yet achieved any great significance in practice are many and various; they are technical and commercial, as well as legal. One reason might be that the Act is still a new piece of legislation and the German legal system only recognises provisions on form as the exception, with the vast majority of legal transactions falling back on written form doing so, therefore, without any legal compulsion. The law did not need to be restated in this area. On the formal side, the need for proper provision of the appropriate technology and the – as yet unsatisfactorily resolved – question of the interaction of different digital signature procedures might constitute the greatest obstacle. Current socio-cultural reservations about electronic signature procedures will probably pale into insignificance given increased penetration, falling costs and familiarisation. Reference is also made in this respect to the aforementioned statistical trend.

a) The concept of written form in § 126 (1) BGB

The focal point in the concept of written form is **§ 126 BGB.** Practically every provision that stipulates written form refers to it directly or indirectly and devolves from this fundamental principle. The Civil Code itself and other rules of civil law use written form in many places, either as it stands or with individual modifications.[33] The procedural codes[34] have, in the course of time, created their specific concept of written form, which is generally distinguishable from – but based on – that contained in the Civil Code, as is written form in administrative law.[35] Conception of the significance of the *Formvorschriftengesetz* therefore requires, first of all, an understanding of the **meaning of written form**.

aa) Document

Written form initially assumes a "document". It is not possible to infer from the Act itself exactly what a document is in this context. Jurisprudence describes the concept as a **"statement of thought embodied in writing"**.[36] The concept of a document in the Civil Code is certainly to be construed somewhat differently to that under the criminal law.[37]

The general view is that the term **embodiment** basically covers any material that can be picked up by hand to form the support medium for a document, ranging from tablets of clay, stone or wax to rolls of papyrus or parchment and, hence, to paper as we know it today. The durable nature of the medium could, at most, make a slight difference, as could the way in which the medium is filled with writing or text. Writing and text as the expression of a statement of thought apparently seemed such an obvious concept to the legislature that they are nowhere defined in the Civil Code, nor do they form any part of the wording of the Act. It therefore follows that even a will written in sand could, in principle, meet the requirements of written form – although this extreme example would scarcely be relevant in practice.[38]

---

[32] *Bettendorf* in: Elektronischer Rechtsverkehr, 16.
[33] See the review at *Palandt/Heinrichs* § 126, paragraph 1.
[34] For the Code of Civil Procedure see *Zöller/Greger* on § 130.
[35] *Schimitz/Schlatmann*, NVwZ, 2002, 1284, *Roßnagel*, DÖV 2001, 223 and references cited there.
[36] *Bettendorf*, in: EDV-Dokumente und Rechtssicherheit, 36.
[37] *Palandt/Heinrichs* § 126, paragraph 2 et seq. cf *Tröndle/Fischer,* § 267, paragraph 2.
[38] The Reichsgericht was obliged to pronounce judgment on a Will written on a piece of slate, reported at DJZ. 15, 594.

In today's legal and commercial environment we are generally concerned with **paper documents**. Paper is a standardised product cheaply available to everyone that is easily adapted to normal business procedures and can be transported using existing working methods. Since most of the population in a developed western society can read and write, such an "embodiment of thought" is an **everyday occurrence** that is easily achievable.

b) Signature or mark

The term **signature**[39] is not defined in the Act either. Nor is this generally necessary because it is something taken for granted by the general public, about which nobody would normally concern himself. Convention dictates, apart from the provisions on form contained in the Civil Code and other legislation, that written documents of all different kinds be signed. It goes without saying that signatures are principally affixed in a **legally material context** and that **legal consequences** then flow from them.

In those cases in which the courts have had to deal with the question of whether there is a signature in existence in the legal sense, the term has generally had to be distinguished from so-called **initialling**,[40] that is to say a shortened form of name that might be used to signify that the party concerned has seen a text but does not necessarily wish to confirm it with his signature and therefore make it become "his" statement. It is not necessary for the signature to be legible although it must be **identifiable as a name**.[41] The Federal Supreme Court has recently had occasion to consider the question of whether a signature to a notarised deed consisting only of a forename is sufficient[42] and found in its judgment, which was heavily criticised by the notarial profession,[43] that this was not the case. The document concerned was therefore null and void. It is difficult to see why this should be the case with a notarised document, which sets out at the beginning all the details of the parties needed to provide an exact identification, whereas a handwritten will can just be signed with a forename without this affecting its validity.[44]

It has been properly pointed out that an **electronic signature is more like a mark made by hand than a proper signature**.[45] The possibility of notarial certification of a mark made by hand, as provided by statute, meeting the requirements of written form in the same way as a signature is, however, quite meaningless in practice. This might be due to the fact that, in our manuscript-based society, illiterates will endeavour to have a signature ready that they can reproduce if necessary. Many will therefore succeed in remaining unrecognised as illiteracy is considered a social stigma. The ability of the person making a declaration to read and write the entire thing is not an inherent requirement of written form[46] so that declarations signed in this way are valid in form.[47] The same applies to declarations couched in a foreign language with which the signatory is not conversant.

c) The creator

---

[39] *Palandt/Heinrichs*, § 126, paragraph 5 et seq.
[40] BGH, NJW, 1967, 2310.
[41] BGH, NJW 1987, 1334; BGH NJW 1994, 55.
[42] BGH, DNotZ 2003, 269.
[43] Heinemann, DNotZ 2003, 269 and references cited there.
[44] The question of whether the creator has actually been proven is a quite different issue.
[45] *Fritzsche/Malzer*, loc. cit.
[46] There are special provisions that apply to illiterates under the notarial authentication procedure.
[47] The question of whether they have correctly come into being in substance and, in particular, whether they can be challenged for mistake or fraud, is a different issue.

The party creating a document is the person to whom the expression of thought embodied in it is to be attributed in the physical sense, i.e. **the person who has affixed the signature found on the document**. Where it is signed by a representative, therefore, the representative will be the creator and not the person represented, to whom the declaration is to be attributed in law. Even where a person is allowed to act in the name of another, where the representative signs in the name of the person whom he represents and thereby binds the latter in a legally valid manner it is the representative who remains the person who is the creator of the document for the purposes of the provision on form. If a person signs in the name of another with the intention of deceiving a third party as to the creator, the signatory will still be the creator. However, this will not then be a case on a par with comparison with an agency arrangement but, where appropriate, a punishable offence of forgery.

It is apparent from the two aforementioned cases that the situation with regard to **electronic signatures is very different**. Where a person produces an electronic signature using digital signature devices made available to him for that purpose the statutory rules on acting in the name of another can be freely applied. However, if the signature devices have been misappropriated there cannot be any question of forgery where digital signatures are produced by the thief. The digital signature, as such, is genuine since the certificate continues to correctly refer to the person to whom it was granted. Unlike a handwritten signature, an electronic signature is not physically linked to the person. Because of this **"man/machine interface"**, therefore, the **attribution of electronic signatures** must occur at a different level. The pros and cons of attribution mechanisms under civil and procedural law will therefore be discussed below in Part E in conjunction with § 292 (a) ZPO *[Code of Civil Procedure]*.[48]

d) The objectives of form

Signatures, as an essential element of written form, and written form as a whole pursue different **objectives of form**, as developed in case-law and jurisprudence.[49]

aa) The identity element enables the person making the declaration to be recognised via his signature. Where a signature is legible the person making the declaration is immediately apparent, whereas even if it is illegible a signature will generally be so individualised that he can nevertheless be "recognised."

In the case of an electronic signature that function must be assumed by the certificate, but the certificate can only fulfil this function if the user of the digital signature is correctly identified before it is created. This is why the *Signaturgesetz* and the *Signaturverordnung* set such great store by identification, as indicated above.

In the case of text form it will be sufficient for the identity of the person making the declaration to be "named".

bb) The authenticity element of a personal signature is intended to prove that a declaration actually comes from the person making it, that is to say that the signature is genuine. Where

---

[48] Attribution was strongly advocated by Internet marketeers and the banking industry during the course of the legislative procedure, see *Schröter, J:* Rechtssicherheit im elektronischen Geschäftsverkehr WM 2000, 2134. Consumer associations and the *Bundesnotarkammer* opposed it, however, as otherwise the signatory would have to bear the risk of any technical error or interference.

[49] An in-depth comparison of the objectives of written form and electronic form can be found at *Rapp*, 156 et seq.

authenticity is disputed, evidence of genuineness can be adduced, for example, by comparing handwriting and obtaining an expert opinion, although official certification here diminishes the litigation risk to almost nothing.

As already mentioned, it is different with an electronic signature. A great deal of the misunderstanding in controversial debate about the equivalence of handwritten signatures and electronic form stems from the special meaning of the term **authenticity** in law. In contrast to digital signature specialists, a digital signature will not be authentic to a lawyer as soon as it can be attributed to a particular person by means of a certificate as per (aa) above; it will only be authentic if it does actually originate with him in a particular case. The effect of this distinction is principally to be seen in cases of misappropriated digital signature devices.

Text form, simply by virtue of being founded in legislation, does not claim to proffer authenticity in the legal sense.

cc) The conclusory element of a handwritten signature alludes to evidence of completion and of the intention of making a declaration. The courts have therefore expressed reservations about signatures on the top of banks' blank payment orders because those signatures do not physically conclude the wording to which they are supposed to relate.[50]

Conclusory function is no problem in the case of an electronic signature because it necessarily encompasses the signed wording in its entirety.

Text form is somewhat less clear-cut here; it requires the "conclusion of a declaration to be ascertained by reproducing a signature or the like".

dd) The warning element of a signature or written form is employed in many provisions when a declarant has to be made aware that a transaction could have consequences that are legally binding on him. For centuries, people have been conscious of the fact that a signature on a written document generally leads to claims that are both actionable and enforceable and that a signature is also demanded by the other side for that very reason. This warning element therefore has special social significance since it is intended to protect people from entering into hasty legal relationships[51]

The issue of whether electronic form can contain such a warning element was one of the most contentious surrounding this part of the *Formvorschriftengesetz*.[52] However, it was eventually properly concluded that, as a general rule, it did so.

In the case of text form the legislature itself assumes that it cannot contain any warning element.

ee) Both the warning element and the **evidentiary element** are vital in daily practice. In legal systems that have a written form of civil law the prosecution of claims is made much easier by written documents. The Code of Civil Procedure (ZPO) lays down special rules for **adducing documentary evidence** and judgment can be obtained more easily in **documentary proceedings**. In practice, therefore, documents afford a particular means of adducing evidence with a high degree of certainty. In most cases of voluntary written form the evidentiary element would have to be the motive in agreeing to a form that is not

---

[50] BGH 113, 48.
[51] Unanimous opinion, see e.g. *Palandt/Heinrichs* § 125 paragraph 1.
[52] For doubts and detailed reasons and other references, see *Rapp*, 163.

mandatory in law. It would also have to be the reason why the copious amounts of written documentation in existence, in practice, are disproportionate to the relatively small number of provisions enacted to govern form.

It is particularly apparent, having regard to the evidentiary element, that an electronic signature is comparable with a handwritten signature in the sense that it is a **functional equivalent**. However, it does *not* follow from this that they are the same process. Although the "man/machine interface" of an electronic signature gives rise to controversy as to the certainty of attribution of electronically signed documents,[53] despite – or even because of – the decision by the legislature to create a special evidence rule for electronically signed documents in § 292 (a) ZPO its value as evidence will normally be accepted when ascertaining whether there has been subsequent interference with the digitally signed document.[54]

Nor does **text form claim to fulfil objectives of form in this respect.** Since the legislature considers text form appropriate for use *inter alia* in areas in which legal relationships can easily be broken off,[55] an evidentiary element would even be somewhat detrimental to that objective. The academically educated lawyer is then faced with the absurdity of a (proven) verbal or other informal declaration being and remaining unreservedly binding, but of this not apparently being the case with text form.[56]

ff) The control element of written form is evident in conjunction with the old wording of § 34 UWG *[Law Prohibiting Unfair Competition]* in relation to procedure of relevance under cartel law; however it is also of significance, for example, in the non-contentious jurisdiction sector in relation to provisions on higher written form such as notarially certified and authenticated declarations in connection with publication in official registers. The control element might possibly have remained "unappreciated" for so long here because the role of the notary in safeguarding all of the other elements is quite rightly given greater emphasis. The notary can only examine the precise content of articles of association of limited companies, property transactions or probate applications – to name just a few practical examples – and can only word them correctly and therefore relieve the burden on the courts, if a document is drawn up and presumed to be complete.[57] Judicial control similarly requires those contracts to be submitted in writing.

The control element **did not play any role** in the introduction of electronic form as the equivalent of ordinary written form even though, for the same reasons as the evidentiary element of that form, it might be present to the same extent. However, as soon as an electronic

---

[53] *Fritzsche/Malzer* loc. cit.; the evidentiary value of digital signatures as regards the creator depends not least of all on the quality of the security infrastructure, see *Rapp*, 163, and *Jungermann*, who devotes the whole of his dissertation to an investigation of this issue.

[54] See, on the elements of security of digital signatures, *Roßnagel,* Recht der Multimediadienste, Einl SigG, paragraph 27.

[55] Explanatory memorandum to the legislation BT-Drs. 14/4987, paragraph 18.

[56] The doctrinal reason for introducing text form remains especially unclear here. However, it follows the trend of shaping contractual relationships so that they can easily be broken off, as can be seen from the cancellation rights introduced into consumer legislation, mostly on the basis of European directives. For their destabilising influence in the context of contractual relationships, see *Richter*, G: Vorsorge als Prinzip einer sozialen Rechtsordnung in Europa, special 2002 DNotZ issue with papers from the 26th German Notarial Conference in Dresden from 19 to 22.6.2002.

[57] This is assured by the notarial authentication procedure.

equivalent is compared with higher written forms it becomes necessary to take it into account.[58]

Text form must again pass in this context. It would be all too easy to circumvent any control objective in reliance upon its "qualified formlessness".[59]

gg) In the case of **notarial authentication** there should finally be added to the aforementioned objectives of form, as a primary factor, the **advisory and safeguard element**, which does not rely upon the physical maker of the declaration but is a function fulfilled by the **notary in the course of his official duties** performed in person and primarily laid down in the *Bundesnotarordnung* (Federal Rules Governing Notaries) and the authentication procedure. It is clear that this function cannot be fulfilled by ordinary written form, electronic form, official certification and definitely not by text form; nor can this function be demanded of those forms.

2. Ordinary written form as the basis of higher written forms

Written form dominates the traditional world of the Civil Code in relation to form. § 126 is the constant fundamental principle on which **higher forms** are based and to which **additional features** are then added.

§ 128 BGB does not itself provide for notarial **authentication** but makes reference to the **provisions of the *Beurkundungsgesetz*** [Authentication Act] on notarial authentication, which do not contain any definition of a notarised deed either. The *Beurkundungsgesetz* should really be classified as a procedural law regulating the production process of a notarised deed; it is taken for granted that the end product of that process will be a paper document that contains a physical embodiment of thought signed by the creator or creators. The procedural provisions are also intended to ensure authenticity in the sense that both origination with the creator (identification of the parties) and the substantive accuracy of the declarations made are assured, in particular, by the advice and caution required under § 17 of the *Beurkundungsgesetz*.

§ 129 BGB provides, with regard to official **certification**, that the "declaration must be drawn up in writing and the declarant's signature certified by a notary". Here too, predominance is given to a paper document, the procedure for which is to governed in this case by the provisions of the *Beurkundungsgesetz* on the certification of signatures and marks made by hand, whereby considerable significance is primarily attributed here to **identifying** the parties – although that is not all.[60]

3. Electronic form as the equivalent of written form

---

[58] An initiative has already been published by the Federal Ministry of Justice with regard to certification, based on recommendations by the *Bundesnotarkammer*.

[59] See the recommendation made by the *Bundesrat* Law and Internal Committee rejecting text form; for its observations during the legislative procedure, see *BR-Drs. 535/1/00.*

[60] For the functions of certification beyond identification see *Bettendorf*, Elektronischer Rechtsverkehr und Schriftform des Zivil-und Prozessrechts, 424.

The comparison between ordinary written form and electronic form drawn in conjunction with the objectives of form led, at the legislative stage, to the conclusion that, although the two forms are not identical, each has its specific strengths and weaknesses and there is nevertheless a fundamental **functional equivalence,**[61] which is justification, in principle, for equating ordinary written form with electronic form. That conclusion was not at all compelling and was mainly politically motivated.[62]

The **comparison is not strictly maintained** in civil law. The legislature has decided that written form can be replaced by electronic form, but only if the Act does not provide to the contrary. Provisions to the contrary are to be found in the Act wherever the legislature took the view that certain objectives of form could not, as yet, be adequately fulfilled by electronic form. In most cases these were **rules safeguarding the interests of consumers,** where it was a matter of contention whether the warning function could be performed by electronic form.[63]

Despite all reservations, the *Formvorschriftengesetz* and the debate surrounding it do nevertheless show that both absolute and relative **equivalence** between written documents and electronically signed documents is **possible** in law. Subsequent amendments would not destroy that basic principle.

As higher forms also devolve from written documents, it had already been suggested quite early on that these should also be included in the proposed legislation, or that electronic form should later be extended to them. This is not yet the case in Germany *de lege lata*.

4. Obstacles to the introduction of electronically signed documents

One objection to electronic form that was raised whilst the Bill was going through parliament was that, in comparison to written form, it would necessitate high **costs and expertise** that was not available to all. Electronically signed documents could only be sent and received by people who had computers with appropriate hardware and software and who also knew how to use them. This therefore excluded a large sector of the population. There was also a risk of the commercially stronger party to a transaction **compelling** the weaker party to use electronic form, when it might be detrimental to it. The individual German provinces were also determined to arrange the introduction of electronic communications in procedural matters for themselves and not be obliged to make **investment** for which no provision had been made in their budgets.

Whilst it is true to say that, when **comparing the costs** involved in meeting the new technical requirements in each case, written form proves the better option, written form has not always been cheap and available to all. The same applied in more recent times to the use of technical means of communication such as the telephone or fax, which in some cases took years from being invented and launched onto the market to become established amongst the population

---

[61] With exceptions: the legislature reserved the right not to allow electronic form to replace written form in all instances and continued to require written form only in § 484 (1), sentence 2, § 492 (1), sentence 2, § 623, § 630, sentence 2, § 761, sentence 2, § 766, sentence 2, § 780, sentence 2, § 781, sentence 2, BGB, § 73, sentence 2, HGB and § 2(1) sentence 2 of the *Nachweisgesetz* (Evidence Act). *Rapp,* p. 166, rightly raises the problem of whether the exceptions conform to European law.

[62] Debate as to the future of Germany's position was conducted *inter alia* on the basis of this argument. What was definitely also significant was the desire of the Federal Government not to be pushed out into the cold politically in relation to the shaping and later implementation of the two EU directives on electronic signatures and electronic commerce.

[63] See the provisions listed in footnote 61.

as a whole. So too in the case of electronic form, mass penetration will not be achieved until a critical mass is reached. In the same way, the **commercial sector will get there** before private households, courts and authorities do.

Commercial pressure is nevertheless particularly heavy in the case of electronic form as there are great hopes for the **Internet as a sales medium** and earlier forms of tele-marketing have proved too insecure. As a result of the possibility of **remote retrieval from the land register and commercial registry** and the **acceptance of faxes** greater expectations have also been aroused in the field of contentious jurisdiction.[64] Notwithstanding unavoidable setbacks, therefore, it can only be a matter of time before electronically signed documents become established here.

IV. Constitutional aspects

1. Legislative powers

Under Article 74 (1) (1) of the *Grundgesetz* (Basic Law, "GG") the **Federation** has concurrent legislative powers **to legislate on civil law**. The Government Bill[65] considers its provisions necessary to create uniformity of living conditions within the territory of the Federation in accordance with Article 72 (2) GG.

2. References to fundamental rights

The issue of **provisions of form** has apparently not yet been the subject of consideration in case-law or academic literature with particular reference to constitutional law. The reason for this might well be that the traditional structure of provisions on form and their status in law are already deeply rooted in the consciousness of the public and also widely accepted.

a) Article 1 (1) and Article 2 (1) GG as assurances of autonomy of the individual

The starting point in constitutional law is the *Grundgesetz*, Articles 1 (1) and 2 (1) of which, within the framework of the general principle of the self-determination of man and general rights of liberty, guarantee **autonomy of the individual**; this, in turn, encompasses the right to actively fashion one's own way of life.[66] Contractual freedom is one of its principal manifestations. Contractual freedom is the freedom of the individual to be responsible for fashioning his own living conditions by contract.[67] It is therefore more than just a right to avert incursion on the part of the State. Both of the aforementioned fundamental rights have a definite "ripple" effect in this respect, extending to the **application of private law** as a so-called **subsequent effect**.[68] Where fundamental rights compel an objective standard, the legislature has a positive obligation to create a legal situation in which the risk of fundamental rights being jeopardised is defeated, although this seldom gives rise to any obligation on the legislature to enact specific provisions.[69]

---

[64] *Liwinska*, loc. cit.
[65] BT-Drs. 14/49/4987, 13.
[66] Lepa, Article 2, paragraph 6; Palandt, Review of § 104 paragraph 1 and further references.
[67] Palandt, Introduction to § 145, paragraph 7.
[68] Lepa, VI, VIII et seq.
[69] Lepa, loc. cit.

b) Restrictions on autonomy of the individual

Under Article 2 (2) GG, however, autonomy of the individual as an inalienable fundamental principle of a liberal legal and constitutional system[70] is subject to **restrictions**, like any other freedoms, if the **rights of others, constitutional order or moral law** are prejudiced. Because of the risk of abuse, whether against economically and socially weaker parties or as an instrument of power in society, the legislature and judiciary consider themselves compelled to counter excesses pursuant to the **social state principle** enshrined in Article 20 (1) GG.[71] Statutory prohibitions that lead, under § 134 BGB, to the invalidity of a transaction that is otherwise properly concluded, the general clause contained in § 138 BGB and the case-law established in that connection are all examples of this.[72]

c) Form under the law as a guarantee of contractual freedom

In the light of the above reflections on the autonomy of the individual the German Civil Code proceeds, in principle, on the basis that declarations of intent are **free of requirements as to form**. **Form** constitutes a restriction on general personal freedom and is therefore an **exception** that requires justification. This must be gauged against the **objectives of form** already considered above.

Earlier forms and their objectives do not – as in the case of § 134 and § 138 BGB – aspire to achieve prohibitive protection by way of embargoes[73] or – as in the case of those cancellation rights so popular in European directives[74] – protection through *ex post facto* machinery. They provide the law with a relative **system of preventive rules** intended to lead to the making of "proper" declarations of intent, albeit with differing requirements. It is in conformity with the principle of **proportionality** that requirements should increase in line with the importance of a transaction. The costs incurred in meeting these requirements can be balanced against the considerable benefit to the individual and to the general public as a whole.[75] The legislature may proceed on the basis that such a code of rules takes account of the principle of autonomy of the individual because, in an idealised case, it enables the individual – and particularly the weaker party in a contractual relationship – to enter into self-regulated legal transactions on his own responsibility.

As indicated above, the State was not compelled to guarantee autonomy of the individual in the German Civil Code in precisely the manner described above but it has nevertheless done so in a fundamentally workable manner for a good hundred years. **Other safeguards** have also become significant, not least of all as a result of the influence of European law, such as the cancellation rights just mentioned, the obligation to provide information, the right for

---

[70] Palandt, Review of § 104, paragraph 1.
[71] Palandt, loc. cit.
[72] Palandt, § 138, paragraph 1.
[73] These represent a major restriction on autonomy of the individual and should be confined to particularly undesirable circumstances.
[74] Although cancellation rights are not foreign to our legal system in principle, they do, however, form an exception to the *pacta sunt servanda* rule and should therefore not be allowed to get out of hand. Otherwise, there is a risk of contractual freedom in the converse sense being prejudiced so that validly concluded contracts can no longer be relied upon and legal certainty suffers as a result.
[75] The cost of legal action in the USA, where there are no provisions on form in relation to private transactions, is four to seven times higher than in countries with a written system of civil law. See *Schwachtgen,* A: Auf dem Weg zur weltumspannenden Authentizität – Ein Berufsstand als Garant der Rechtssicherheit wirtschaftlicher Entwicklung, DNotZ 1999, 268, 270 et seq.

associations to take legal action, judicial control of substance and other manifestations. A correspondingly large number of problems in the legal system and statutory amendments have had to be overcome. However, the **provisions on form in the BGB** had remained unchanged until the introduction of electronic form and text form. Shaping their **further development** in line with the existing system therefore represented a particular challenge. The new forms will also have to be gauged against how well they fit in with the existing hierarchy and successfully guarantee autonomy of the individual in the fulfilment of relevant objectives of form.

V. References to European law

1. The Digital Signatures Directive and the E-Commerce Directive as sources of law

The civil-law element and technical civil-law organisation aspects of digital signatures under the **Digital Signatures Directive**[76] and the **E-Commerce Directive**[77] are transposed by both the ***Signaturgesetz*** and the ***Formvorschriftengesetz.*** [78] The demarcation reflected in the directives is more or less followed in the pattern of Digital Signatures Directive/*Signaturgesetz* and E-Commerce Directive/civil law issues, although this is not always the case because not all legal systems within the European Union differentiate between public and private law and the different approaches to regulation can impinge upon each other.

The directives do stress, however, that it is of considerable importance to the future **economic development of the Internal Market** to achieve **as high a degree of integration and harmonisation as possible** within the area of information and communications services and their underlying technologies, as well as in the area of electronically initiated or electronically implemented legal relationships. The directives could only set up a framework within which Member States retain some **leeway when transposing them**. Legal variations must therefore be expected. Also, technically speaking, the directives could not impose **interoperability** of hardware, software and modes of procedure from on high. A lot of development work will still have to be undertaken by trade and industry in the future before wide *de facto* **convergence** of legal systems and products is achieved. The principal aim of the directives was to create a basis for this work.

Creating a legal framework for the subsequent technical interoperability of digital signatures and their cross-border legal recognition, cross-border provision of information and communications services – such as certification services – and the legally secure electronic conclusion of contracts and associated requirements, encompassing all of the interests of Member States, trade and industry, professional groups and consumers, was like trying to achieve the impossible. The process leading up to the adoption of both directives was therefore surrounded in **controversy**. Many inconsistencies of wording are due to the

---

[76] Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures, OJ L 13/12 of 19.01.2000.

[77] Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ("Directive on electronic commerce").

[78] No account is taken here of any other requirement to transpose these Directives; see in this respect the various papers incorporated in *Roßnagel* (publisher), Recht der Multimediadienste.

compromises that were necessary in order to reach any agreement at all. These inconsistencies have naturally made transposition into national law more difficult.

2. Guidelines for national law purposes

The following **transposition principles** are derived from the directives in particular:

a) The term "electronic signature"

"Electronic signature" is defined in Article 2 of the Digital Signatures Directive, as is "advanced electronic signature", which has in turn, when it is based on a qualified certificate, become incorporated in the *Signaturgesetz* and therefore also in electronic form by means of the **"qualified electronic signature."**

b) Equality in law between digital and non-digital signatures

Under Article 5 (1) of the Digital Signatures Directive "advanced electronic signatures which are based on a qualified certificate… [must] (a) 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; and (b) [be] admissible as evidence in legal proceedings."

Unlike admissibility as evidence – see below under E – the **standard of form** of electronic signatures represented a major problem. Under the new *Signaturgesetz* qualified signatures can be produced in conformity with the guidelines in Article 3 of the directive more easily than under the previous *Signaturgesetz.* The provision of certification services must not now be conditional, for instance, on **prior approval**. In the case of certification authorities that support qualified signatures the *Signaturgesetz* only makes provision for **repressive action** where problems have already arisen.

As described above, the German legislature has nevertheless decided, in accordance with the system under the first *Signaturgesetz,* to keep approved certification authorities (some of which are already in existence) and transfer them to the system of **voluntarily accredited certification authorities** permitted under the Digital Signatures Directive. Those authorities that undergo the accreditation procedure will be subjected, like the approved authorities before them, to an in-depth **preventive investigation** to justify those authorities being given accreditation in the form of a **seal of quality**. This is permitted under European law in order to raise the standard of certification services rendered, that very question having been one of the most contentious encountered during procedure leading up to the adoption of the directive. However, the legal effects provided in Article 5 of the Digital Signatures Directive should not apply at "higher level".

§ 126 (a) BGB therefore refers only to qualified electronic signatures and, in the case of electronic form, therefore also permits procedures that have not been examined by the authorities and found to be in order before accreditation is given. This represents a clear **backward step in relation to requirements** compared to the ideas in the forefront of legislative procedure on the *Formvorschriftengesetz*, when reference was made to the old version of the *Signaturgesetz* that only covered approved certification authorities. Under that Act only procedures provided by bodies corresponding to accredited certification authorities could have satisfied electronic form.

The current position represents a **compromise** achieved only after considerable struggle. The economic policy argument ultimately gained the upper hand – that is to say, only by achieving European harmonisation would it be possible to counter the technological supremacy of the USA in this field, as the USA is having even more problems with the harmonisation of its digital signatures legislation than the EU due to the legal system in operation there.

The problem of consequential referral, which, in the event of amendments being made to the Digital Signatures Directive, could lead to a further downward spiral in standards in the *Signaturgesetz* and hence to debasement of electronic form, resulting in legislative influence on the part of the European Union in a core area of civil law over which the EU does not have legislative powers, was acknowledged to be a prime issue in relation to the *Formvorschriftengesetz* and became the subject of controversial debate. The influence of the committee to be formed under Article 9 of the directive is not yet quite clear, in particular. As the directive now stands, it could be used by those governments of Member States whose interests are not as well represented to continually put the topic on the agenda, with the result that reliability and ultimately legal certainty in this sensitive area could constantly be called into question.

c) The conclusion of contracts by electronic means

The E-Commerce Directive goes one step further in its Article 9 than does Article 5 of the Digital Signatures Directive. Subparagraph 1 provides that Member States must ensure that **contracts can be concluded by electronic means**. In particular, legislation must not impede the conclusion of such contracts or result in them being deprived of validity. Contracts that create or transfer rights in real estate, the official certification and authentication sector, contracts of suretyship and agreements on collateral securities furnished by private individuals and contracts governed by family law or by the law of succession are all excluded under subparagraph 2.

Where electronic contracts have to be made possible the national legislatures are given the choice of deciding **not to impose legal form**[79] or of keeping their **provisions on form** but then offering an **electronic equivalent**. Since official certification and authentication are not covered by Article 9 (1) there was no need to transpose such provisions in the case of "higher forms".[80] However, written form was affected; under German law it can be replaced in the future by electronic form, although only if the Act does not provide otherwise. There are certainly no objections to this proviso in relation to the exceptions under Article 9 (2). As regards those provisions on written form the substitution of which is precluded, the European Court of Justice might have to establish in a particular case whether the proviso conforms to European law.[81]

d) Text form

---

[79] This was the subject of intense examination in the run up to the *Formvorschriftengesetz* but did not ultimately lead to the abolition of provisions on form but, in a few cases, to merely downgrading from written form to text form, see for example § 5 (3) sentence 1 and § 8 (1) of the *Bundeskleingartengesetz*, (Federal Law on Small Gardens), § 5 (1) sentence 1 of the *Grundbuchbereinigungsgesetz* (Land Register Amendment Act), § 6 (1) of the *Nutzungsentgeltverordnung* (Regulation on land use payments) etc.

[80] The *Bundesnotarkammer* has nevertheless proposed many times that an electronic equivalent should be set up here too.

[81] See footnote 61.

There was **no fear of any conflict with European law** in the case of text form because, by definition, it is not confined to one particular medium.

VI. Appraisal

Despite the controversial debate leading up to its enactment and subject to the various appraisals still to be undertaken in the case of individual provisions, credit must be given to the *Formvorschriftengesetz* for providing the legal system with an up-to-date **means of making legally secure declarations of intent** using **electronic form**. Electronic form has been successfully inserted into the General Part of the Civil Code in a linguistically succinct manner true to the German legal system. By referring to the *Signaturgesetz* and *Signaturverordnung* it became possible to avoid technical terms in defining form and the individual provisions on form, whilst at the same time ensuring that electronic form always reflects state of the art technology. It is to the credit of, firstly, the *Formvorschriftengesetz* and, secondly, the viability of the rules on declaration of intent and legal transactions in the Civil Code, which are more than one hundred years old, that it has been possible to achieve such **extrapolation** – even incorporating European guidelines – **without any fundamental challenge to legal doctrine.**

Text form, on the other hand, is an unknown entity where there is no sign of any need for regulation or fulfilment of objectives of form. Apart from those areas already assigned to it[82] it will probably not acquire any material significance in practice. Its real disappointment lies in the over-regulation expressed in it and the blurring of the former sharp doctrinal distinction between freedom from form being the general rule and written form, as the former lowest level of form, being the exception.

Practical experience of electronic form still has some way to go. There are as yet not many applications for electronic signature procedures with or without any link to legal transactions in the qualified electronic signature field.[83] However, a great deal of time was taken between invention and market penetration in the case of other technical innovations that are now deemed so essential, such as the telephone and fax. Lack of interoperability and cost reasons always have a dampening effect on the development of mass applications. Where there is sufficient penetration, however, the price drops and application opportunities multiply. It is to be hoped that the "critical mass" of users will be exceeded very soon so that it is possible to achieve the intended objective of the *Formvorschriftengesetz*, which is to facilitate the conduct of secure electronic legal transactions amongst the general public.

E. Electronic documents as evidence in court

I. Preliminary remarks

In the ***Gesetz zur Anpassung der Formvorschriften des Privatrechts und anderer Vorschriften an den modernen Rechtsgeschäftsverkehr*** *(Formvorschriftengesetz)* – in

---

[82] There has been no definition of text form. Some special elements of more simple written form served as the model for text form, however, and now come within its scope of application, particularly the MHG *[Rent Act]*.

[83] The *Arbeitsgemeinschaft Wirtschaftliche Verwaltung (AWV)* (Economic Administration Working Party) is working on a publication that will appear shortly.

addition to establishing the legal framework for the conclusion of contracts by electronic means discussed above in Part D – the legislature has, as already mentioned, covered dealing with electronic documents within the framework of codes of judicial procedure and adducing evidence using documents signed by electronic means.

The issue of the electronic document as part of **electronic procedural measures** will be ignored here as this is a specific matter covered by codes of procedure and separate from the question of the conclusion of contracts by electronic means and the adducing of evidence using electronic documents. In this context, having particular regard to the reservations of the federal provinces, the decision for or against digital signature procedure was dictated more by cost concerns than was the case with electronic form under § 126 (a) BGB since its effects are directly felt by the public authorities' budgets – and particularly those of the provinces.[84] The desire to once again achieve entirely uniform standards and definitions by making use of electronic form in the field of civil law and codes of procedure has therefore not been realised for political and financial reasons. This is regrettable, but does not have any direct bearing on the form of contracts concluded by electronic means or on court rulings in legal proceedings based thereon.

The **adducing and appraisal of evidence** based on documents and the **conclusive value** of a document present a problem that is directly associated with the civil-law form concerned. This is an issue that has often been expounded in court proceedings, namely that of the **functions of form**, with the **evidentiary element** being uppermost here. It is therefore necessary to establish where in the evidence system the electronic document lies.

The Code of Civil Procedure (ZPO) recognises five different ways of adducing evidence:
- by personal inspection, §§ 371 et seq. ZPO,
- by the testimony of witnesses, §§ 373 et seq. ZPO,
- by expert evidence, §§ 402 et seq. ZPO,
- by documentary evidence, §§ 415 et seq. ZPO,
- by examining the parties, §§ 445 et seq. ZPO.

Contrary to what might have been suggested by a new law on provisions of form, the legislature was unable to decide to incorporate electronic documents in the form pursuant to § 126 (a) BGB into the system of documentary evidence. In § 292 (a) ZPO it therefore gave legislative expression for the first time to a **case of *prima facie* evidence**.

II. The legal position in detail

1. Treatment of written documents under the law of evidence[85]

Evidence in the form of documentation is dealt with in the ZPO *[Code of Civil Procedure]* in § 415 et seq. The **procedural provisions** on adducing documentary evidence are contained in § 420 et seq. ZPO. Under § 420, for example, provision is made for **adducing evidence by submitting documents**. The principal criterion in the provisions on documentary evidence is

[84] See in this respect the observations in the programme drawn up by the Bavarian Provincial Ministry of the Interior cited in footnote 12.

[85] The following presentation summarises the observations by Geimer in Zőller, Zivilprozessordnung zum Urkundsbeweis.

that statute lays down **legal rules of evidence for genuine and unadulterated documents** (§ 419) that greatly **temper the principle of free appraisal of evidence** under § 286 ZPO. If, on the face of it, a document contains defects, the principle of free appraisal of evidence will apply under § 419.

Statute also distinguishes between official documents and private documents:

a) Official documents

aa) Definition

Official documents are **certificates** provided by **authorities or persons (notaries, consular officials etc) officially appointed** for that purpose, which certify declarations by third parties under private or public law (§ 415), official declarations and decisions (§ 417) and findings (§ 418). Procedure and jurisdiction in relation to the drawing up of official documents are governed by the ***Beurkundungsgesetz*** (Authentication Act).

bb) Evidentiary value

§ 415 (1) states that **certificates** provide **full proof of the procedure authenticated by the authority or authenticating officer** if the statutory provisions on form are met and the authenticating officer has acted within the scope of his powers. What is then proven is the **making** of the authenticated declaration and not its substantive accuracy. In the case of a notarised document the scope of conclusiveness also encompasses the **personal identity** of the declarant and the **completeness and accuracy** of the authenticated legal declaration of intent. According to subparagraph 2, proof that the procedure was improperly authenticated is admissible. However, the burden of proof then lies with the party alleging it.

Under § 417, which relates to official documents establishing **an authority's own declarations of intent**, these constitute **full evidence of their substance**. Proof that the authority has made the authenticated declaration (formal conclusiveness) is irrefutable. Admissible evidence to the contrary can only be directed here against the internal (substantive) conclusiveness. This means, in the case of a grant of probate, for example, that no counter-evidence is permissible on the question of whether probate has been granted if that probate certificate is genuine and unadulterated. Counter-evidence must be directed at its substantive correctness, attesting that the oath of inheritance was false. Motives and reasons for decisions do not form part of either the formal or substantive conclusiveness of such documents.

§ 418 relates to official **documentation of findings by the authenticating officer**, that is to say, documents that do not affirm declarations by third parties (§ 415) or declarations by the authority itself (§ 417). These documents establish **full proof of the facts attested therein**. Under subparagraph 2 of this provision proof of the inaccuracy of the attested facts is admissible unless provincial legislation precludes or restricts such evidence. Here too, it is necessary for the document to be genuine and unadulterated. A death certificate therefore proves the death of a person (but not the cause of death).

There are official documents in which different parts are classifiable under more than one of the provisions outlined above. A notarised last will and testament, for example, contains the notary's findings as to the testator's identity and testamentary capacity. Under § 415, therefore, it proves the making of the testator's testamentary dispositions by him, under § 418

(3) in conjunction with § 10 and § 28 of the *Beurkundungsgesetz* it proves the identity of the testator and under § 418 (1) it establishes that the signature was written in his own hand; it does not, however, establish the full competence or testamentary capacity determined by the notary in the document since this constitutes the notary's legal appraisal of his own findings.

b) Private documents

aa) Definition

Private documents (§ 416) are **declarations drawn up and signed by private individuals** even if their signature is officially certified. The most important application concerns declarations that were drawn up in accordance with the requirements of written form under § 126 BGB. Documents that were intended to be official documents but which are not valid as such because of defects of form might possibly still be valid as private documents.

Under the law of civil procedure, a **signature does not constitute an essential characteristic** of a document if the authorship of the document is ascertainable from its other content (§ 439 (2)). This is different to the standards for written form, which require the signature to be an essential characteristic. It is therefore possible to have written documents that do not satisfy the requirements of written form under civil law but can nevertheless form the subject of documentary proceedings in a civil action. These used to be unsigned private documents not subject to the rules on form. These documents are now covered by text form. The wider field of application of text form beyond the physical embodiment of thought, particularly in the sphere of electronically stored declarations without a digital signature or without a qualified digital signature, still lies outside the scope of documentary evidence. Proof still has to be adduced here in the form of personal inspection or by expert evidence.

bb) Evidentiary value

Under § 416, private documents, provided that they are signed by the creator or have on them a notarially certified mark made by hand, constitute **absolute evidence that the declarations contained in them were made by the creator**. In this instance too it is necessary for the document to be externally unadulterated. However, in contrast to official documents, it is not necessary to furnish counter-evidence with regard to genuineness; it will be enough to **contest authenticity**. Under § 440 (1) the party adducing the evidence must then prove authenticity. § 440 (2) makes things somewhat easier here, in that authenticity will be assumed as regards the writing above the signature or handwritten mark if the authenticity of the signature has been established or the handwritten mark has been notarially certified. In that case the party challenging the evidence must adduce counter-evidence with regard to the authenticity of the writing. Generally speaking, therefore, the dispute will centre upon who actually signed the document.

2. Treatment of electronic documents under the law of evidence

a) General context

Electronic documents are generally introduced into proceedings as **personal inspection evidence** with the court hearing substitute or supplementary evidence, if necessary, through the testimony of experts.

There have therefore never been any **admissibility difficulties in proceedings** in relation to electronic documents. In particular, the Anglo-Saxon problem of **admissibility**, that is to say the requirement that a judge should first permit an electronic document to be allowed as evidence in proceedings, is quite foreign to German procedural law. All evidence comes under one of the aforementioned five ways of adducing evidence**.** The parties alone decide what should be introduced into the proceedings.

Nor does German procedural law recognise the priority given to the testimony of witnesses enjoyed in the case of Anglo-Saxon procedure. Conversely, nor does German procedural law recognise **the priority of documentary evidence**. In practice, however, documentary evidence still plays a major role in civil law. Even if it is not afforded special status within the aforementioned means of adducing evidence when introduced into legal proceedings, documentary evidence is deemed **more reliable** than other kinds of evidence and therefore enjoys **advantages**, not just under the **statutory rules of evidence** that restrict the free appraisal of evidence but also in the light of §§ 592 et seq. ZPO, which make **documentary procedure** available as a simplified form of procedure where, particularly in the case of claims for payment of a sum of money, all of the facts necessary to justify the claim can be proven by way of documents.

It should be emphasised in relation to the comparison between written documents and electronic documents that written documents are covered by the aforementioned statutory rules of evidence, which, in the case of official documents, can extend to a presumption of accuracy of the declaration's content. Whilst the **litigation risk** in the case of documents is generally relatively **low**, **in the case of official documents it is very low.** This must be the reason why writing in its various manifestations has always been customary whenever contractual claims are to be substantiated, even in areas in which there are no rules on form. It is not surprising therefore that, from the very beginning, debate on electronic documents should not just have encompassed electronic form as the equivalent of written form but should also have attempted to draw a comparison with written documents in procedural law.

b) Legal basis under the *Formvorschriftengesetz*

c) Electronic documents

aa) No provision for **official documents in electronic form** is yet made in the *Beurkundungsgesetz de lege lata*. However, this will probably change quite soon.[86]

bb) Private electronic documents are governed by §§ 126 (a) et seq. BGB. Traditionally, however – as already mentioned – electronic documents are not categorised as documentary evidence but as evidence in the form of personal inspection with free appraisal of evidence. During debate on the *Formvorschriftengesetz* criticism was levelled at this, not least of all on the technical side, on the grounds that use of expensive digital signature procedures would not be worth it given the continuing **litigation risk**. It was pointed out, however, that – on a correct assessment of the security function of digital signature procedures – the end result of free appraisal of evidence must be that the possibility of forgery is practically precluded, at least if the requirements of the *Signaturgesetz* are met. The extent to which the courts might be capable of making the consistently high value judgment on qualified and accredited digital signature procedures necessary for the purposes of legal certainty, whilst at the same time

[86] See the aforementioned draft put forward by the Federal Ministry of Justice, publication of which cannot yet be cited.

properly appraising the differences in certainty compared to other procedures, was a contentious issue.

It might have been appropriate to create a § 416 (a) ZPO which, on an analogy with § 416, **attributed the same conclusive force to qualified digitally signed electronic documents as to the private written documents stated in § 416**. It might then have been possible to easily develop § 440 ZPO to cover cases of unrecognised electronic documents. In this instance too, authenticity would have had to be proven by the party bearing the burden of proof. Proof of authenticity within the meaning of § 440 (2) could nevertheless have been adduced more easily in the case of a qualified digital signature than in the case of a written document since, given the existence of a qualified certificate, it would generally have been possible to pinpoint the creator.

This mode of classification of qualified digitally signed electronic documents within the evidence system of the ZPO appeared to the legislature to be premature in view of lack of experience with such documents in legal proceedings, but as there was nevertheless enormous support from interested sectors of the economy[87] at the legislative stage urging that the interests of recipients of electronically signed documents be safeguarded, there was considerable political pressure to act. The alternative suggested, namely the introduction of a **substantive-law attribution provision** for just electronic documents, which would have been alien to the German legal system and entirely without precedent, was ultimately rejected in favour of the new § 292 (a) ZPO discussed below, which was just as alien to the system.

Electronic form is now certainly given great prominence in the **law of evidence** under the ZPO in the area of appraisal of electronically signed documents. The new § 292 (a) ZPO does, however, break new legislative ground. § 292 (a) ZPO does not equate electronically signed documents with **written documents**, as demanded in the early stages.[88] It leaves them, in principle, but not absolutely, within the **sphere of evidence by personal inspection**, where they had been before and as had originally been suggested by the other side.[89] The *Formvorschriftengesetz* introduced for the first time a **statutorily regulated form of *prima facie* evidence** in relation to the object of inspection which, despite all former reservations about the legal system and legal policy, consists of the presumption that a qualified electronic signature generally stems from the person to whom the accompanying certificate has been issued. Qualified digitally signed electronic documents have thereby achieved extremely **high status** in legal proceedings, at least comparable in decision-making effect with documentary evidence, although as yet without any equivalent in procedural law.

***Prima facie* evidence** is not a sixth kind of evidence but a **possibility of appraising evidence** developed by case-law. It makes it possible to prove causality or fault in the case of typical sequences of events even without any foundation in fact, based on **principles derived from experience**. One example derived from case-law, for instance, is the principle that fingerprints are unique. However, the courts have rejected a principle derived from experience to the effect that a fax does indeed come from the party stated in the activity report. A principle derived from experience constitutes **interim evidence** that can be upset by **simplified counter-evidence** if it is proven that there is a serious possibility of an occurrence other than the one derived from experience.

---

[87] *Schröter*, J: Rechtssicherheit im elektronischen Geschäftsverkehr, WM 2000, 2134; cited in footnote 41.
[88] *Erber-Faller,* Gesetzgebungsvorschläge der Bundesnotarkammer zur Einführung elektronischer Unterschriften, loc. cit.
[89] *Melullis*, K. Zum Regelungsbedarf bei der elektronischen Willenserklärung, MDR, 1994, 109.

It was proposed by the banks, in particular, in connection with **EC card abuse cases,** that the rules of *prima facie* evidence should also apply here. The banks' argument was that, where it is alleged that EC cards have been used by an unauthorised third party the card holder must have intentionally or unintentionally disclosed the PIN number since for technical reasons, in view of the high level of security afforded by the technology used, it was not possible in practice to figure out the PIN. The lower courts initially accepted the argument put forward by the banks, but later changed their minds when reasonable doubts about security were raised in expert opinion. Despite the dissimilarly greater amount of experience in dealing with EC cards compared with the still considerably newer digital signature technology, the courts have not yet recognised **any principle derived from experience** for EC cards to the effect that EC card transactions are normally occasioned by the card holder. As yet, therefore, the principles of *prima facie* evidence do not apply here.[90]

All the more surprising, therefore, that in § 292 (a) ZPO, with complete disregard for any conclusions drawn from past experience in an area in which there is still not a single court decision, the legislature should have introduced statutory *prima facie* evidence whilst initially declining equal status with documentary evidence.

It is possible, however, that this misjudgement might be rectified in the foreseeable future, at least in part, by the ***Justizkommunikationsgesetz*** [Judicial Communications Bill][91] that has now been published. It provides that § 292 (a) ZPO should be repealed and replaced by a rule that is more true to the system. The new § 371 (a) ZPO is therefore expected to provide that the law on the conclusiveness of private documents should apply *mutatis mutandis* to private electronic documents to which a qualified electronic signature has been affixed. Statutory *prima facie* evidence also raises its head again here. § 437 applies *mutatis mutandis* to electronic official documents. A new § 416 (a) ZPO is also intended to govern the conclusiveness of a printout of an electronic official document. This provision equates a printout that has a certification stamp on it with a certified copy of an official document. According to the reasons given in the Bill, the legislature's purpose is, on the one hand, to make it clear that, systematically speaking, electronic documents belong within the sphere of personal inspection evidence whilst, for the most part, equating them in the future with documentary evidence as regards the effects of that evidence.

III. Links with European law

1. Form and the effect of evidence

In European-law circles debate on both form and the effects of evidence has been conducted in parallel, so that reference can be made to the comments on European law in Part D for the background to an understanding of that debate.

2. European-law requirements regarding the effect of evidence

Under Article 5 (1) of the Digital Signatures Directive "advanced electronic signatures which are based on a qualified certificate… (b) [must be] admissible as **evidence** in legal proceedings."

---

[90] *Bettendorf*, Elektronischer Rechtsverkehr, 23, and references cited there.
[91] Accessible via http://www.bmj.bund.de

There was no need for any transposition by Germany as far as the fundamental status of electronically signed documents in legal proceedings was concerned because, as observed above, electronic documents of all kinds had always been admissible in court proceedings without any problem under the ZPO as **objects of personal inspection,** either with or without the involvement of an expert. The purpose of this provision in the directive is to address the problem of "admissibility" under Anglo-Saxon-influenced legal systems, as described above, where evidence of this kind might not fit in with the practice of witness testimony and admissibility procedure might have to take place.

§ 292 (a) ZPO, or its successor in a new § 371 (a) ZPO, was therefore not made necessary by European law.

IV. Appraisal

It is therefore maintained that, whilst electronic form in the Civil Code is fashioned on written form and its effects extensively compared with that written form, an electronic document is still treated in the ZPO as an object of personal inspection if it corresponds to electronic form, albeit with greater restrictions on the free appraisal of evidence than for documentary evidence. The legislature was unable to give a convincing explanation for its consequent departure from the normal legal system or for its conflicting conclusion.

As a result of the new provision, the roles of parties in proceedings are expected to shift in favour of the one with whom the burden of proof of electronic conclusion of a contract lies. Since, where an electronically signed document is submitted in evidence and the authenticity of the digital signature is contested, the **full onus of proof** thereof does not lie with the party adducing that evidence, as in the case of a written document, and since it is **up to the party contesting the evidence to upset that evidence**, the burden of proof must, generally speaking, turn out to be to the disadvantage of the actual or alleged signatory even though the legislature decided *against* any attribution provision under civil law and *against* full equal status in civil law because of the technical characteristics of electronic signatures. It remains to be seen how the courts will deal with this new form of *prima facie* evidence.

F. Notaries and electronic legal transactions

I. ICT use and electronic communications within notarial practices

1. Position of notaries

On 1.1.2003 there were 1,654 single-profession notaries practising in Germany and 8,370 notaries carrying on that occupation in addition to practising as advocates, making a total number within the profession of 10,024.[92] There are no official statistics on ICT use amongst notaries.

[92] Source: *Bundesnotarkammer* notarial statistics, available on its website. The 488 state-employed notaries working alongside single-profession and advocate notaries in the Württemberg part of Baden-Würtemberg as civil servants and the 150 judges who act as notaries in the Baden district are not members of a *Notarkammer* (Notarial Association) and do not come directly under the *Bundesnotarordnung* (Federal Notarial Code). As civil servants/judges they are not self-employed. Their professional status is an historical exception. Because

Generally speaking, however, the **trend must be the same as for businesses in general**.[93] It is apparent from an unrepresentative and unpublished survey that the *Bundesnotarkammer* undertook in 1994 amongst notaries in all different regional areas and with all kinds of different notarial structures in preparation for its pilot project on electronic communication with land registries, that approximately 80 percent of notaries were using computers in their practices at that time. This percentage must have risen in the meantime, i.e. ten years after that survey was taken, to approximately 100 percent.

Very many practices, particularly amongst the younger members of the profession, are contactable by **e-mail**. However only a few colleagues have **their own home pages**, as advertising by the profession is hidebound by restrictions and the provision of notarial services on the Internet in a manner that conforms to the rules governing the profession is only possible to a limited extent.[94] It will therefore generally not be worthwhile setting up a home page with an attractive layout in view of the amount of time and expenditure involved. The purchase of office materials and legal literature via the Internet would make up an extremely small percentage of use amongst notaries.

However, in order to develop the Internet as a means of enabling the profession to disseminate information and present itself to the public, several ***Notarkammern*** (Notarial Associations) are now offering their members, through their electronic notarial records, the possibility of using a home page designed according to standardised criteria. These pages make data available online, particularly details of access such as addresses, telephone numbers, fax numbers, opening hours and other data important to the public if they wish to have contact with notaries, such as knowledge of foreign languages and the like, providing it on the Internet free of charge without any problem as to professional codes of practice.

Those notaries who are part of the **notary network** are able to use a highly secure qualified electronic signature both inside and outside the profession's internal communications network with a secure Internet connection. To date, 138 colleagues in 84 firms of notaries are making use of this facility. The *Bundesnotarkammer* also offers an opportunity to those colleagues who do not wish to participate in the notary network to just make use of the digital signature procedure. According to details provided by the *Bundesnotarkammer* (as at January 2004) 209 certificates of this kind have now been issued.

2. Position of professional organisations

The professional organisations, that is to say the ***Bundesnotarkammer***[95] and the ***Notarkammern*** in the various provinces,[96] the ***Deutsches Notarinstitut*** (Institute of Notaries),[97] the German Institute of Advocates' ***Fachinstitut für Notare*** (Notarial Institute)[98] and the ***Deutsche Notar-Zeitschrift***,[99] are widely represented on the Internet, offering their members

---

they are few in number and because of the differences that do not bear comparison in relation to the topic under discussion here, they will not be taken into account below.

93 See above, B.I.2.

94 *Becker* looks in detail, in his paper in NotBZ 99, 239 et seq., at the legal circumstances surrounding the use of the Internet by notaries.

95 *http://www.bnotk.de.*

96 The Notarial Associations are accessible via links from the *Bundesnotarkammer* website.

97 Accessible by a link from the *Bundesnotarkammer* website.

98 Accessible by a link from the *Bundesnotarkammer* website.

99 Accessible by a link from the *Bundesnotarkammer* website.

specialist services via that medium and also accessible by e-mail. **Training courses** organised by the *Fachinstitut für Notare* are always announced on the Institute's website, for example, and can also be booked online. Booking confirmation is immediately sent electronically. For legal and practical reasons, however, the invoice, conference documentation and, later, the certificate of attendance are sent by the traditional postal method. In addition to **general information** on notaries and their organisations, the notarial associations' websites also contain **wording of instruments relevant to the profession** and a whole host of information helpful to the general public, such as **lists of notarial associations and of notaries belonging to those notarial associations** and **links** to other websites of interest. The *Deutsches Notarinstitut* website devotes itself, in particular, to legal issues in areas of relevance to the notarial profession contained in **reports, case-law, academic literature and legislation**. By logging on to one of the professional organisations' websites, therefore, any notary with an Internet connection can now carry out well-directed research into particular areas of relevance. However, only members of the notary network are allowed to use the *Deutsches Notarinstitut* database for online research. Electronic signatures provide security of access here.

3. The computerised land register and commercial register: the most important external communication partners

§§ 126 to 134 of the *Grundbuchordnung* (Land Registry Code) and § 8 (a) of the *Handelsgesetzbuch* (Commercial Code) were introduced under the *Registerverfahrensbeschleunigungsgesetz* (Registration Procedure Acceleration Act)[100] of 20.12.1993. They form the basis of the computerised land and commercial registers. They afford the federal provinces an opportunity to use the benefits of ICT to rationalise and accelerate their registration procedures and offer an improved service. Regular users can, in particular, download the content of registers online. With the Land Registry, online connection is made via a dial-up procedure that checks right of access via hardware and software features. There are plans to introduce Internet technology here. Downloading from the commercial register is already possible via the Internet.

a) Paper-based registers

The land register has traditionally been kept on paper in various external forms – originally as a bound volume and more recently in loose-leaf form – just as the commercial register was kept on index cards. This is a common feature of forms of documentation that have otherwise differed throughout the history of the land register and commercial register.[101] Their paper base also essentially determines the form of registration procedures, inspection, reproduction of copies etc.[102] The transition from hand-written to type-written registers made the keeping of the land register much easier and better but did not fundamentally change the mode of procedure determined by the paper medium.

b) Computer-based registration

Consideration was first given to rationalising the keeping of the land register using computer systems in the year 1970.[103] Plans to computerise the Land Registry completely had to be put

---

[100] BGBl. I, 2355.
[101] See the detailed review at *Meikel/Böhringer* Introduction A (and references cited there).
[102] *Demharter* § 126, paragraph 1.
[103] See the brief summary at *Schöner/Stöber*, paragraph 84 and references cited there.

back indefinitely at the beginning of the eighties, however, in view of the unavailability of practicable procedures to record old data records and the high cost of storage space.

Instead, various federal provinces devised procedures for the computer-based keeping of land and commercial registers whereby computers were used to conveniently draw up registration documents with the help of text modules and to print out registration text, "action taken" notices, correspondence with district land registry authorities and other documentation.

The common element in all these procedures is that role of the computer is reduced to that of an intelligent writing system creating paper-based land and commercial registers. Electronic data holding comes to an end with the physical embodiment of the recorded data on paper, which is why it was not necessary to make any fundamental changes to the laws on land and commercial registration in order to incorporate this mode of computer use.

c) Full electronic registration
The innovation brought about by the *Registerverfahrensbeschleunigungsgesetz* consisted of the fact that the land register and commercial register can be kept as "computer files", that is to say they do not have to be embodied on paper in a printout because the content of the data storage medium itself constitutes the land or commercial register.

The computerised land register and commercial register consists of three main parts:
aa) The **production system** enables the registration text to be created, in particular.
bb) An **archive component** must be added. This is the "computer file", that is to say the core element of the electronic register. Just like the production system, its design is determined by working methods within the competent authority.
cc) The **search component** is used to recover stored data essential in order to inspect the computerised land or commercial register.

Land and commercial registry files have not yet been affected by electronic procedure. The legal foundation already exists in § 10 (a) of the *Grundbuchordnung* and § 8 (a) (3) of the *Handelsgesetzbuch*. There do not as yet, however, seem to be any signs of technical change at the Land Registry. Occasional use is made of the possibility of lodging certain documentation electronically afforded under § 8 (a) (1) sentence 3, such as annual and group accounts.

d) Data formats and the recording of old data
There are **various systems** in existence **but, as yet, no open interfaces**. Just as with the differing technical features of computer-based procedures, no provision has been made for uniform federal guidelines for an electronic land or commercial register either. The federal provinces take independent decisions on the systems to be used and the manner in which conversion is to be achieved. Legislation does not stipulate any technical procedures, nor does it therefore lay down any express requirements with regard to data format. These matters are essentially determined in the light of factual and economic considerations and can therefore differ from province to province. There is therefore a risk that certain advantages of computerised land registers or computerised commercial registers, such as the possibility of submitting and receiving data, online enquiries etc., will come to an end at provincial borders. This can only be avoided if there are open interfaces used by the various individual systems. Otherwise a uniform remote enquiry system extending throughout the whole country will not be possible without having to go through multiple validation and charging systems.

CI and NCI data: Data gathered with the help of word processing systems are normally stored as text data in the form of coded information (CI). For instance, registration text is held in the production system in this way. The commercial register covers less data and was therefore recorded from the very beginning by inputting all of the text manually. This proved commercially unfeasible at the Bavarian Land Registry[104] whereas, in Saxony, the land registers all had to be recorded again after the "changeover" so that the text also had to be re-entered.[105] Bavaria therefore decided to enter the data using scanning devices, with an image of the individual pages being produced, digitalised and stored as so-called non-coded (NCI) information. Although the amount of storage space required for NCI data is ten times greater, the drop in the price of data storage media means that this method of recording the inputting of CI data in the case of large databases is nevertheless better commercially. The newly recorded CI data and scanned NCI data are presented together on screen in such a way that the user does not notice the join.

OCR post editing: It is basically possible to subsequently convert NCI data to CI data at any time using so-called OCR programmes (OCR = Optical Character Recognition). The standard of conversion is essentially determined, however, by the quality of the originals. Handwritten entries, different standards of handwriting and overlapping lines and text (so common with paper-based land registers) lead to such bad recognition quotas that the amount of manual post-editing required also makes these procedures look impractical at the present time.

Future developments: Pilot projects by the *Bundesnotarkammer* in conjunction with the judicial authorities in the Free State of Bavaria and the Free State of Saxony have shown[106] that further rationalisation and improvements can be achieved by greater integration of data processing by the land/commercial registers and notaries, for instance in the submission and receipt of electronic data, although numerous organisational, technical and legal problems will have to be resolved. The electronic "action taken" notice proved immediately achievable. Nevertheless, it has still not been implemented. All the same, the computerised land register now has the "notary ping", an automatic registration notification device enabling the notary to make his own purposeful inspection of the land register.

e) Proper data processing principles

Proper data processing principles must be observed where land registers and commercial registers are kept on computer. These include all of the requirements resulting from the very nature of computerised data storage.[107]

There is a need for **devices to prevent people from gaining unauthorised access** to the data processing hardware and to the data stored on it. This necessitates the physically separate accommodation of hardware that only allows authorised users to gain access, as well as appropriate identification and authentication hardware and software mechanisms (PIN, password protection). If the hardware is connected to telecommunications equipment outsiders must be prevented from gaining access (hackers).

It is also necessary to prevent the **loss of and interference with data**. In addition to generally ensuring trouble-free operation by creating appropriate operating conditions and maintenance facilities, as well as operating procedures safe from error inputs and plausibility

---

[104] Estimates showed that at the Munich Land Registry alone 6 million pages of old data had to be entered.

[105] See *Göttlinger* loc. cit.

[106] Reports on the activities of the *Bundesnotarkammer* in 1995, DNotZ 96, 720 et seq. and 1996, DNotZ 97, 520 et seq. and final project report (unpublished).

[107] § 126 (1) *Grundbuchordnung*, Appendix to § 126 (3) and § 64 to 66 of the *Grundbuchverfügung* (Land Register Order).

checks built into programmes, this also covers appropriate storage technologies (WORM, CD-ROM), the production of back-up copies and their physically separate storage, the logging of changes made and, finally, an electronic signature to conclude a registration. Particular significance is also to be attributed to the **long-term availability of stored data**. This can necessitate a change in components in line with technical progress and changes in security requirements.

II. The electronic notarised deed

1. The present stage of debate

Developments in Germany are currently based on the assumption that electronic notarised documents, like paper-based notarised documents, are the **result of traditional authentication procedure**. The core areas of this procedure are the notary's advisory and supervisory activities. Additional rules would only have to be brought in so far as the treatment of documents is concerned. Current opinion amongst notarial circles in Germany is that, for the foreseeable future, documentation should still be drawn up by notaries in paper form. This is not imperative in the long term, as shown by the introduction of the fully electronic land register and commercial register. However, documentation that exists exclusively in an electronic data memory raises enormous problems in relation to data security, to which notaries do not wish to lay themselves open at present. With the computerised land register, access to and dealings with the electronic data memory device is therefore regulated in great technical and administrative detail.[108] A complete or partial failure in the land register, which does not just publish the document text (as under the French system) but reports on the legal circumstances given the constitutive effect of entries, would cause immeasurable damage so that the cost of land registry security would have to be commensurate. Unlike the case of remote retrieval from the land register as a public register, however, there is currently no such demand in practice for holding computerised data on notarised documents. The principal demand here relates to the facility for documents to be transmitted electronically, particularly to official registers, plus applications for registration – possibly even in a form that facilitates direct reprocessing.

2. Electronic certification of signatures

§ 129 BGB is the standard rule on which all legal provisions relating to the official certification of signatures are based. Under that provision it is necessary for "the declaration to be drawn up in writing and the declarant's signature to be certified by a notary". As already observed, an immediate need for an equivalent electronic form might exist, having regard to **§ 29 of the *Grundbuchordnung* and § 12 of the *Handelsgesetzbuch*, in the case of electronic submission of applications** to the land register or commercial register respectively.

The making of a written declaration by the party concerned, or by a notary on behalf of the party concerned, could also easily be replaced in connection with § 129 BGB by the proposed (simple) electronic form under § 126 (a) BGB, although this would require the party concerned, as the holder of a digital signature key, to be able to produce digital signatures

---

[108] See footnote 107 above.

satisfying the requirements of electronic signatures. If this should not be the case it might then be possible to insert a kind of "piggy back procedure" in the form of an entry in which the notary states that the party concerned has made the particular declaration but cannot sign it electronically because he does not have his own digital signature key and that the notary is therefore signing the declaration digitally on behalf of the party concerned using his own key.

The certification of signatures by a notary, also required by statute, is not regulated by the Civil Code itself; **§ 39 and 40 of the *Beurkundungsgesetz*** apply here. These provisions make it clear that the **authentication procedure does not just constitute certification of a signature**, encompassing the obligations related to written documentation that the notary himself must observe, but also includes **findings and evaluations** that must first be made by the notary.[109] An authentication stamp is therefore the result of an intellectual process linked to the personal service of the notary and not amenable to electronisation. However, the stamp itself, like the declaration of the party whose signature is to be certified, can exist in the form of digital data and can therefore, on an analogy with (simple) electronic form, be marked with the notary's electronic signature as the equivalent of a non-digital signature and then in turn marked with the notary's professional attribute as the equivalent of a seal.

An electronically transmitted declaration of this kind could initially be verified at the Land Registry by checking the digital signature against the named identity of the notary and then by checking the attribute certificate against the notary's standing.

This kind of electronic certification has now become imminent as a result of the ***Justizkommunikationsgesetz*** (Judicial Communications Bill).[110] Its primary purpose is to open up civil proceedings and specialist areas of the judicature to the electronic handling of case files. Parties to proceedings – judges, lawyers and litigants – are to have an opportunity to use electronic means of communication in the future on a par with traditional paper-based written form or verbal form. The former standards regarding form are to remain unchanged, however, even where an electronic means of transmission is used. In order to apply the differences in the current law to electronic working methods the Bill distinguishes between simple, advanced and qualified digital signatures and electronic digital signatures based on constantly verifiable certificates. The latter are currently only offered by accredited certificate-service-providers (so-called "trust centres"). The Bill amends the *Beurkundungsgesetz* by introducing a new § 39 (a) entitled "Simple electronic certificates", which reads as follows: "Authentications and other certificates within the meaning of § 39 may be drawn up electronically. A document drawn up for this purpose must be marked with a **qualified electronic signature under the *Signaturgesetz*** that is based on a certificate that is **constantly verifiable**. The certificate must be linked to **confirmation of the notary's standing** from the competent authority. The certificate must state the place and date of issue". The Act is intended to come into force in the notarial field by 1 April 2005, so that – if the Bill becomes law on time – from that date onwards, all notaries will have to have the necessary facilities available to enable them to undertake electronic certification.

3. Electronic certification of copies

The certification of copies governed by § 42 could become important where digital documents are required for electronic processing within the economy and amongst public

---

[109] See in detail *Bettendorf*, Elektronischer Rechtsverehr und Schriftform des Zivil- und Prozessrechts, in: Notar und Rechtsgestaltung, Cologne 1998.

[110] Accessible via the Federal Ministry of Justice website at http://www.bmj.bund.de

authorities but where the originals are only available in paper form. In the case of certificates of achievement, birth, marriage and death certificates, contracts and other such legally relevant documents one can hardly expect digital "copies" to suffice since the party involved – a person making an application to a public authority, for instance – would be able to create them himself by scanning or some other method of data entry. Conversely, it is conceivable that if the electronic procedure were to produce exclusively digital documents but a party were to require credible evidence on paper, a simple printout might not suffice.[111] One example of this already in existence in the notarial field is the computerised land register, from which the Land Registry produces "official printouts", which serve the legal purpose of certified copies of pages from the land register under § 131 GBO.

In those instances of relevance to notarial practice an appraisal would initially have to be undertaken by the notary as to the nature and quality of the document a certified copy[112] of which is required. Where the original is a paper document, § 42 of the *Beurkundungsgesetz* can apply *mutatis mutandis* as before. Where the certification procedure is based on a digital document it would have to be established, for instance, whether or not it bears an electronic signature or whether anything odd was noticed when it was examined. As far as the final certification stamp, the notary's signature and the affixing of the seal are concerned, the present rule continues to apply if the original is a digital document and the intended result is a paper document. In the opposite case the observations expressed above in paragraph 2 apply accordingly. The aforementioned *Justizkommunikationsgesetz* provides, in its future § 42 (4), in the case of certification of a printout of an electronic document that bears a qualified electronic signature under the *Signaturgesetz*, that the result of verification of the digital signature must be documented.

4. Electronic documents

§ 128 BGB (like §129) contains an element of reference that assumes the existence of a notarial authentication procedure but does not itself regulate it. The *Beurkundungsgesetz* is again relevant here.

In the case of authentication of declarations of intent and of other authentication procedures that do not come under the aforementioned headings, no other appraisal will initially apply. On the contrary, the very authentication of declarations of intent was regulated by the legislature in such detail in order to ensure that the authentication procedure does fulfil its objective where the **party involved is to be warned against the hasty conclusion of contracts, where particular evidence is to be preserved or when legal certainty and clarity is required having regard to the public nature of official registers.** The difference compared to certification procedures is therefore that the aim is to ensure, by means of numerous procedural provisions, that the declarations made are **"authentic"** – that is to say, that they are not just expressed in this way by the parties but that they are also intended as such. This specifically requires the **personal attendance of the parties** and **personal compliance with procedural provisions by the notary**. The substitution of electronic media is therefore incompatible with the objectives of authentication procedure in the area relating to provisions on notarial form.

---

[111] This eventuality is already covered in relation to administrative procedure in § 33 VwVfG. A corresponding rule under the *Beurkundungsgesetz* is proposed for official certification in the aforementioned Federal Ministry of Justice working paper.

[112] In the case of digital documents it would be better, in reliance upon § 131 GBO, to talk about certified or official printouts.

The situation is somewhat different with regard to the **result** of the authentication procedure, namely the **document itself**. Just like the results of certification procedures, this document can be circulated in either electronic or paper form. Reference can therefore be made in this respect to the comments on electronic certification.

5. Remote electronic authentication and certification

The above observations are not in any way levelled at a situation in which a notary as "neutral third party" accepts the mutual declarations of intent made by two contracting parties not present in the same location and transmitted via remote communication procedure, where he documents receipt and produces electronic or paper proof of the process. Legal advice, expert opinion and execution activities are also quite obviously involved here. A notary might also be asked to undertake quasi-certification action electronically. With these kinds of services a need might arise in the sphere of electronic transactions that it is in accordance with the traditional functions of a notary to satisfy and which is achievable today outside documentary activities as **"other" services** on behalf of the parties under § 24 of the *Bundesnotarordnung*. These new kinds of services are to be considered a desirable expansion of the range of notarial services on offer, for which the notary network or some other technical device forms a particularly suitable basis. At the present time, however, they must not be confused with statutorily regulated notarial authentication that fulfils the objectives stipulated by the legislature in each individual case and over which neither the notary nor the parties have any leeway.

The decision to also allow **"remote electronic authentication"** within the sphere of provisions on notarial form could only be taken by the legislature following appraisal as to what objectives of form are intended to be achieved as a result. It might therefore initially be conceivable to arrange matters based on the objectives of form outlined above and to create another new kind of notarial form in the future that would enable a legal transaction to be simultaneously concluded remotely by electronic means without the parties having physical contact with each other but with each party nevertheless being in the presence of a notary. The only thing that would then suffer would be the immediateness of the transaction. The objectives of form in relation to authentication could nevertheless still be retained, as already described. Such a procedure might not be inconceivable in the case of international corporate or real-estate contracts as most of these transactions are preceded by a lengthy perusal stage, with drafts being exchanged that are generally based on recommendations by advisers. Final accuracy checks would be undertaken, as normal, by the local notary present who, under the rules applicable to him, would have gone through the wording of the contract with the party appearing before him before it was electronically signed by the party and the notary. After finally being sent off, the other contracting party and his notary could countersign the text electronically and ultimately send the document back again. The notaries involved would have to record the contract wording and time stamp in an electronic archive, from which both paper and electronic copies could be forthcoming. This form of remote authentication would not essentially differ from the present trusted method of authentication with powers of attorney, authentication subject to subsequent approval or the splitting of a legal transaction into offer and acceptance, the problem being that, in the event of abuse, one contracting party can be precluded by such devices from obtaining efficient advice and service from the notary.

A further resultant arrangement could be made **without** the (as yet essential) **personal presence of the parties before a notary**. This would seem possible in the area of

authentication of facts and certification, for instance, where the predominant issue is the proof that a declaration of intent has been sent with the correct content and where the text sent is perhaps to be stamped with a reliable time stamp. In the case of authentication of certain facts such as copyright priority matters, for example, such procedure would be conceivable and satisfactory if, because of the standard and quality of the digital signal procedure, it were possible to identify the parties with sufficient certainty and the work to be protected were available electronically. The notary would then document receipt free of errors, clarify any questions by remote electronic communication methods and enter the text received in his archives with his digital signature and time stamp affixed, so that an electronic or paper copy could then be made in addition to a certificate showing the time and date of receipt. Since, as things stand at present, the notary must also be able to issue paper copies of an electronic record of documents, there would not then be any question of whether the addressee of such declarations could accept documents already electronically signed.

In contrast, in German **land register and register law** the admission of such 'remote electronic authentication' would be incompatible with the basic principles of the respective legal materials. The decisive procedural law here demands the personal handing over of the relevant declarations by the parties involved in publicly certified form and excludes concealed representation; however remote authentication would make such concealed representation possible, as the power of access to a signature key can always be granted to third parties. This strictness of form has its source in the formalisation of the register procedure, as a result of which the substantial legal effects of an entry (loss of rights, public credence) are essentially supported by declarations from the parties concerned. On a very practical level remote authentication would make it impossible for a court to check important data which, like adulthood, address or the interested party's asset status, cannot be taken from the electronic certificate. Moreover, in register law certain penal law security mechanisms can only be realised through highly personal penalty-supported securities. Correspondingly a core component of the public deed lies in the requirement for personal presence, which seeks to avoid subsequent (civil or penal law) conflict as to whether declarations were given by the correct person and free of duress, deception and impairments in legal capacity.

6. Implementation in practice

An initial step towards full electronic notarial documentation in practice will be taken when original documents drawn up on paper continue to be kept by the notary but can also be stored and transmitted electronically as well. The recommended amendment to the *Beurkundungsgesetz* proposed by the Federal Ministry of Justice on the initiative put forward by the *Bundesnotarkammer*, as mentioned above, therefore stipulates in the case of electronic certification how the identicalness of paper documents and electronic copies or electronically submitted documents and paper printouts can be proven. This mode of certification is linked by its very nature to the certification of copies, in accordance with the present system. In this respect the nature of the notary's work will not change as a result of the new media. Nor will it do so if the wording of a document, whether confined to authentication of a signature or certification of a register or whether encompassing the entire legal transaction, were to be kept in future in an **exclusively electronic documentary record**.[113]

[113] Austrian notaries have developed a model of what an electronic document archive could look like, especially a central one, which relieves the individual notary of the problem.

7. Functional equivalence of electronic notarial form

The functional equivalence of traditional notarial form and electronic notarial form is a different issue. It is not confined to reconstruction of how a notarised deed comes about but leads, in particular, to a comparison of **uses in legal transactions**. Because of its **stronger evidentiary function**[114] secure electronic transmission and submission as evidence in proceedings are the predominant issues here. Electronic form, as understood here, can be achieved securely with the use of electronic signature procedures. Qualified signatures will not suffice in this context however. The deployment of accredited procedures will be needed and these are already available to German notaries.

III. New notarial services in electronic transactions

As far as new services are concerned, such as the conclusive documentation of communication procedures, the documentation of private contracts concluded by remote means without a notary being present, the non-physical storage of data by a notary or the aforementioned remote authentication and certification procedures etc., their development and availability in general legal transactions is quite feasible and desirable from the point of view of the German notary and also compatible with his status as a holder of public office. Such activities currently remain **outside the scope of authentication activities** and, as already mentioned, still come within the framework of **other legal services**. At the present time, because of the importance attached to legal transactions requiring authentication, their significance compared to electronically transmitted "classic" notarised documents is marginal. It remains to be seen whether this will change in the foreseeable future for a larger number of processes. It could, however, be advantageous to notaries worldwide for early thought to be given to how such a need can be met by notaries, particularly with regard to transactions over large distances such as cross-border legal transactions, for example, which would derive the most benefit from this.

IV. Interim summary

The burdensome explosive development in electronic legal transactions has not yet extended to notaries. The reason for this might be that the introduction of electronic notarised deeds is not a decision for the participants in legal transactions but for the State. Because the State's policy on innovation is fairly reserved, concentrating on improving its own internal organisation and still declining to allow any **technically effective online access to the land register or the lodging of applications to all public registers using electronic means**, there are unlikely to be any major new developments in this field for some considerable time. One important stimulus would be the **introduction of electronic real-estate files or electronic registration files**, an idea that has not yet progressed beyond the creation of a legal framework. Communication with other extremely inhomogeneously combined parties within the legal system would not seem easy to organise either. This will not change until very compatible technologies are introduced.

---

[114] See the observations on the conclusive effect of notarised deeds in procedural law in Part E.

V. Professional certification by notaries[115]

1 Pilot project on "Notarial certification by notaries under the *Signaturgesetz* and notary network"

a) Why was such a project needed?

It has proven increasingly necessary amongst notaries to correspond electronically with parties to documents and their legal, tax and business advisors, as well as with colleagues and other parties – even where the official duty of confidentiality applies. The *Registerverfahrensbeschleunigungsgesetz* of 20.12.1993[116] facilitates electronic communication with two principal notary addresses in the non-contentious jurisdiction sector as the basis for online retrieval from the land register and commercial register. The land registers in several of the federal States are already kept electronically. Professional governing bodies and individual notaries chiefly work amongst themselves on computers. Correspondence between them could be conducted by electronic means in many instances at little cost. In all these examples the **advantages of electronic communication** have to be balanced against the **risks** of electronic data coming to the knowledge of unauthorised persons or being falsified before it is received by the addressee.

In order to make secure, confidential and reliable communication possible for professional purposes, therefore, it was necessary to define those **scenarios** and **requirements** that were initially to be the subject of a pilot project so that step by step, based on the **experience** obtained, more and more users and applications could be connected up. One other important aspect, not least of all in relation to the timing of the subsequent general operating stage, was the possibility of incorporating new state of the art **security features** and making them available centrally to all linked colleagues.

b) Investigation of electronic legal transactions in a notarial context

aa) Volume of communications

An investigation by the *Bundesnotarkammer* into volume of notarial communications, broken down according to their (principally professional) contacts, revealed the results shown in Diagram 1 (see attached). The relative **spread of communications over individual contacts** or categories of contacts is of more interest here than the absolute figures. By far the highest amount of contact is with land registries, followed by tax authorities, banks, local authorities and registration authorities. All of these bodies are institutional contacts, where it can be assumed that computers have been installed and that there is a willingness to transmit data electronically in the medium to long term because it is seen by both sides to be advantageous. A "critical mass" will quickly be reached in these areas at more or less the same time, making electronic communication profitable.

bb) Analysis of individual transactions

When one considers chains of communication by reference to typical transactions such as the purchase of real estate (see Diagram 2 attached) it becomes even more apparent that notaries are working in a heterogeneous environment. With some contacts, electronic communication

---

[115] For corresponding professional projects amongst advocates and tax consultants, see the papers by Scherf and Leistenschneider in: Erber-Faller (publisher) Electronischer Rechtsverkehr.

[116] BGBl. I, 2182.

is already possible right now, whilst with others it will not be so for the foreseeable future. This finding matches the general observation in legal and commercial life that transition from paper to electronic systems is gradually taking place without any end to paper being in sight. We must therefore get used, not to a paperless office, but to **working as efficiently as possible in a composite environment**.

c) The *Signaturgesetz* as the legal basis of professional certification

The title of the pilot project indicates one of its core aspects, although certification is not the only field that is new or material in this context. Certification under the *Signaturgesetz* does, however, constitute such an important aspect of professional policy that it will be gone into in more detail below.

aa) Law applicable

The central concepts in the *Signaturgesetz* are the **digital signature**, the **certification authority** and the **certificate**. Reference is made here to Part C. As already described there, the provisions on issuing and discontinuing certificates state that the certification authority has to **reliably identify** persons who apply for a certificate. The certification authority must also, at the request of the applicant, include details of professional status in the digital signature key certificate or an **attribute certificate** if status is reliably proven to it. It is also stated there that the certification authority must discontinue a certificate *inter alia* if a digital signature key holder or his representative so request or if a certificate is obtained on the basis of false data. Where false details are given of a professional qualification the professional governing body may also demand that it be discontinued.

As the law now stands it is for the certification authorities to **identify** future key holders and **determine attribute characteristics**. Even before enactment of the *Signaturgesetz* it was acknowledged that there might be a problem as to what status identification has and whether it might not be an (exclusively) notarial responsibility. Once it had come into force, however, the specific problems that could arise in the event of inaccurate attribute certification were soon realised. If, for instance, an attribute certificate is to correctly reflect a power of attorney granted by agreement or by statute, if it is to expediently formulate restrictions on the use of digital signatures in electronic transactions or make statements about the capacity of a professional person, these are matters requiring **legal competence typically attributable to a notary** and not to a commercial certification authority. A certification authority designed to perform a technical administrative service will either be placed under considerable strain as a result of the need to keep a reserve of sufficiently qualified experts or else will run the risk of being held liable for putting its signature to a false legal certificate. The questions of what relationship such an activity bears to the *Rechtsberatungsmissbrauchgesetz* (Law on the Abuse of Legal Advice), which makes the right to give legal advice the prerogative of the legal professions, and of what value attribute certificates can have in legal transactions if they are issued without adequate expert qualifications, would not appear to have yet been the subject of either academic consideration or court action. Given the increasingly widespread use of such certificates, however, problems such as these will not be long in coming. Telesec, the first approved certification authority, has therefore decided, as a precaution and in conjunction with its approval, to only bring attribute certificates into circulation with the backing of notarial assistance. Details can be seen from the *Bundesnotarkammer* circular.[117]

bb) Consequences with regard to professional certification

---

[117] Circular 47/98 printed as an appendix to *Erber-Faller (publisher)***:** *Electronischer Rechtsverkehr.*

The reasons for the *Signaturgesetz* given before its enactment were that certification of general legal transactions was deemed to be a **commercial activity** that was basically to be carried out by **commercially operating undertakings acting in competition**. This approach is also taken in the **European Digital Signatures Directive** and in other international and supranational initiatives on electronic legal and commercial transactions. Although the *Bundesrat*[118] had referred at the parliamentary stage to the relationship between certification and certain aspects of notarial activity, particularly the identification obligation and the use of data in certificates in relation to certification, and although it had expressed reservations about the *Signaturgesetz* also similarly derived from studies undertaken by the *Bundesnotarkammer,* the *Bundestag* did not endorse them.

It has subsequently been inferred from this that even **professional certification** could be carried out by commercial undertakings only and that the involvement of professional governing bodies could be confined to the contribution of information on the issue or discontinuation of attribute certificates. However, the legislature opposed this view in the context of the reform of the law governing notaries, as is made clear in the statement of reasons for the draft § 78 (2) of the *Bundesnotarordnung*. This provides that the power to perform "other duties that serve the purpose for which they are created" also encompasses the **authority of the *Bundesnotarkammer* to set up and operate a certification authority**. Whilst it might not be possible to derive from this any generalised norm for all professional rules, the *Signaturgesetz* would nevertheless be the wrong place in the system for such rules specific to the profession. It will, in fact, be necessary to examine in each individual sector whether enabling rules already exist or may have to be established within the professional governing bodies or associations concerned.

Conversely, the presence of an enabling rule does not impose a **duty** on the professional governing body to set up its own certification authority. It will be necessary to carry out a careful check in each individual case to see whether the requirements of the *Signaturgesetz* can be satisfied by one profession alone or only in cooperation with other professions and whether the appropriate solution would be to establish a "virtual certification authority" (see above Part C) in cooperation with a commercial provider, or for members of the professions to simply refer to the services of commercial providers with the simultaneous cooperation of professional governing bodies in attribute certification.

d) Technical implementation amongst notaries

In order to provide German notaries with a practical basis for electronic legal transactions the *Bundesnotarkammer* has set up the **notary network**. The notary network is carried by Notarnet GmbH, which maintains a centre of operations in Cologne providing notaries with the necessary support and giving advice to professional organisations.

This is a so-called "virtual private network" (VPN) to which notaries can link up. They receive a **digital signature** with an **attribute** on a **chip card** identifying them as notaries, together with an **encrypting mechanism** and a further key that can be used with notarial applications as an **authentication mechanism. Certification is then carried out by the *Bundesnotarkammer* as a so-called "virtual certification authority"** (see Part C). Provision has also been made for special **secure Internet access**. The network therefore facilitates secure communication between the notaries themselves and with outsiders.

---

[118] The second legislative chamber in which the federal provinces safeguard their interests.

Notaries can use the network to access databases containing reports and case-law compiled by the *Deutsches Notarinstitut*. The aim in the future is for access to be gained to the electronic land register, for applications to the land registry and registration authorities to be lodged electronically and for land registry and commercial registry files to be viewed online.

2. Future prospects

The *Bundesnotarkammer* is contemplating **other applications** for the notary network, such as a **central register of wills** that could be technically organised along the lines of the **register of enduring powers of attorney and living wills** currently being introduced.

If the legislature were to introduce electronic notarised deeds it would be necessary to resolve the **archive problem**. German notaries do not currently have any practical experience of this. However, Austrian notaries have already taken exemplary action in this respect. In Germany we only have experience here with the electronic land register, which is also by nature an official document. The notary network and Notarnet GmbH are the infrastructures that will respond to such developments.

With the notary network German notaries have taken a huge step towards **safeguarding their future in Germany**. Given the high level of PC and Internet penetration amongst notaries and the projects that have already been carried out, they are well equipped not only to win the debate on IT security but also to dominate discussion in Germany, putting forward their own proposals on electronic documents, electronic communications and new electronic services.

For the **future of notaries throughout the world**, however, it will be essential not only to continue to press on with the free circulation of paper-based notarial documents but also to produce them electronically as soon as possible. The U.I.N.L. is being asked here to act as a catalyst amongst its member notaries, to promote the development of concepts and to also further the political desires of the notarial profession to technically and legally establish criteria for the provision of free-market notarial services in an electronically dominated world.

The U.I.N.L. is therefore called upon, in particular, to emphasise to its members and outside contacts the need for **development of appropriate technologies**, **their application to notaries in their work and the high standards required in notarial certification and notarial authentication procedure in electronic legal transactions** in order to also maintain and increase the added value of notarial activity in the field of electronic legal transactions.

G. Summary

- Germany has already achieved **a high level of computer penetration,** both generally and in the notarial sector. Federal and provincial authorities are promoting the aim of increased computer application in the administrative and commercial sectors by the allocation of considerable resources – primarily, the furnishing of PCs and Internet technology. **Digital signature procedures have not yet achieved a commensurate level of importance in practice**.

- There are a ***Signaturgesetz*** and a ***Signaturverordnung*** in existence. The European-law guidelines in the Digital Signatures Directive have been transposed. A certification authority's operation does not basically require approval. The Act also facilitates voluntary accreditation for the acquisition of a State seal of quality. The technical/administrative rules make provision for a two-tier certification infrastructure with a root CA in this particular field, so relevant to the notarial profession.

- **Certification authorities** that do not conform to the requirements of the *Signaturgesetz* are permitted. The digital signatures supported by them do not, however, have the status of electronic form, nor do they have privileged status in legal proceedings. Nor can these certification authorities therefore claim to provide qualified digital signatures.

- The **use** of electronic signatures is **optional**.

- **Legal transactions that require a particular form are the exception** under German law. If a legal transaction that requires a particular form is to be concluded electronically, this will be possible in the context of **electronic form**.

- The **German Civil Code** regulates **electronic form** after the fashion of **written form**. Electronic form requires the wording of a declaration to be digitally signed with a qualified electronic signature in accordance with the *Signaturgesetz*. Written form may always replace electronic form. Electronic form may generally replace written form, but not in those exceptional cases pinpointed by the legislature.

- The **Code of Civil Procedure** treats electronic documents as **objects of personal inspection**. Where an electronic document bears a qualified digital signature the Act, by way of an express principle derived from experience (*prima facie* evidence), assumes that it is genuine, i.e. that it originates from the holder of the particular digital signature certificate concerned. This *prima facie* evidence can only be upset by facts that give rise to serious doubts that the declaration was intentionally made by the digital signature key holder.

- **German notaries** have already made early inroads into promoting the use of computers and electronic signature procedures in their particular field with their **Electronic Legal Transactions Project** and have greatly furthered the creation of a basis for electronic signatures under public law, civil law and procedural law. The *Bundesnotarkammer* is an **accredited certification authority**, which issues chip cards for digital signatures, encrypting procedure and an **attribute certificate as notarial identification**. The notary network provides an infrastructure by which notaries can communicate securely with each other and outside parties. The *Deutsches*

Notarinstitut electronic database of legal opinion and the contingency register of enduring powers of attorney and living wills are applications that are already in existence and others will undoubtedly follow.

- **Communication** with computer-based registers, particularly the **land register and commercial register**, is not yet possible through the notary network. A dial-up procedure is being set up for online retrieval from the land register in which authorised access will be checked by hardware and software features. The introduction of Internet technology is proposed here. It is already possible to retrieve data from the commercial register online via the Internet. It is not yet possible to lodge applications electronically.

- The introduction of **electronic official certification** for notaries is scheduled for 1 April 2005 **under the *Justizkommunikationsgesetz,* which is still a Bill. Electronic authentication and electronic archiving of documents** could be introduced based on the infrastructures designed by the notarial profession, although their exact shape and scope of application require further consideration. The legislator can only introduce **remote electronic authentication** in areas where the form purposes require personal provision of statements free of duress, deception and absence of legal capacity.

- The **provision of new notarial services**, such as the documentation of communication processes or the non-physical storage of data, would appear to be sensible and should be supported.

- It is necessary to create **internationally comparable standards** for electronic notarial documents so that documentation procedures can function freely even without paper and electronic notarised deeds be accepted worldwide. The U.I.N.L. is therefore called upon, in particular, to emphasise to its members and their outside contacts the need for **development of appropriate technologies**, **their application to notaries in their work and the high standards required in notarial certification and notarial authentication procedure in electronic legal transactions.**

Legislation

§ 126 BGB Schriftform
(1) Ist durch Gesetz schriftliche Form vorgeschrieben, so muss die Urkunde von dem Aussteller eigenhändig durch Namensunterschrift oder mittels notariell beglaubigten Handzeichens unterzeichnet werden.

(2) Bei einem Vertrage muss die Unterzeichnung der Parteien auf derselben Urkunde erfolgen. Werden über den Vertrag mehrere gleich lautende Urkunden aufgenommen, so genügt es, wenn jede Partei die für die andere Partei bestimmte Urkunde unterzeichnet.

(3) Die schriftliche Form kann durch die elektronische Form ersetzt werden, wenn sich nicht aus dem Gesetz ein anderes ergibt.

(4) Die schriftliche Form wird durch die notarielle Beurkundung ersetzt.

§ 126 a BGB Elektronische Form
(1) Soll die gesetzlich vorgeschriebene schriftliche Form durch die elektronische Form ersetzt werden, so muss der Aussteller der Erklärung dieser seinen Namen hinzufügen und das elektronische Dokument mit einer qualifizierten elektronischen Signatur nach dem Signaturgesetz versehen.

(2) Bei einem Vertrag müssen die Parteien jeweils ein gleichlautendes Dokument in der in Absatz 1 bezeichneten Weise elektronisch signieren.

§ 126 b BGB Textform
Ist durch Gesetz Textform vorgeschrieben, so muss die Erklärung in einer Urkunde oder auf andere zur dauerhaften Wiedergabe in Schriftzeichen geeignete Weise abgegeben, die Person des Erklärenden genannt und der Abschluss der Erklärung durch Nachbildung der Namensunterschrift oder anders erkennbar gemacht werden.

§ 128 BGB Notarielle Beurkundung
Ist durch Gesetz notarielle Beurkundung eines Vertrags vorgeschrieben, so genügt es, wenn zunächst der Antrag und sodann die Annahme des Antrags von einem Notar beurkundet wird.

§ 129 BGB Öffentliche Beglaubigung
(1) Ist durch Gesetz für eine Erklärung öffentliche Beglaubigung vorgeschrieben, so muss die Erklärung schriftlich abgefasst und die Unterschrift des Erklärenden von einem Notar beglaubigt werden. Wird die Erklärung von dem Aussteller mittels Handzeichens unterzeichnet, so ist die in § 126 Abs. 1 vorgeschriebene Beglaubigung des Handzeichens erforderlich und genügend.

(2) Die öffentliche Beglaubigung wird durch die notarielle Beurkundung der Erklärung ersetzt.

§17 BeurkG (Prüfungs- und Belehrungspflichten)
(1) Der Notar soll den Willen der Beteiligten erforschen, den Sachverhalt klären, die Beteiligten über die rechtliche Tragweite des Geschäfts belehren und ihre Erklärungen klar und unzweideutig in der Niederschrift wiedergeben. Dabei solle darauf achten, dass Irrtümer und Zweifel vermieden sowie unerfahrene und ungewandte Beteiligte nicht benachteiligt werden.

(2) Bestehen Zweifel, ob das Geschäft dem Gesetz oder dem wahren Willen der Beteiligten entspricht, so sollen die Bedenken mit den Beteiligten erörtert werden. Zweifelt der Notar an der Wirksamkeit des Geschäfts und bestehen die Beteiligten auf der Beurkundung, so soll er die Belehrung und die dazu abgegebenen Erklärungen der Beteiligten in der Niederschrift vermerken.

(2a) Der Notar soll das Beurkundungsverfahren so gestalten, dass die Einhaltung der Pflichten nach den Absätzen 1 und 2 gewährleistet ist.

(3) Kommt ausländisches Recht zur Anwendung oder bestehen darüber Zweifel, so soll der Notar die Beteiligten darauf hinweisen und dies in der Niederschrift vermerken. Zu Belehrung über den Inhalt ausländischer Rechtsordnungen ist er nicht verpflichtet.

§ 286 ZPO Freie Beweiswürdigung
(1) Das Gericht hat unter Berücksichtigung des gesamten Inhalts der Verhandlungen und des Ergebnisses einer etwaigen Beweisaufnahme nach freier Überzeugung zu entscheiden, ob eine tatsächliche Behauptung für wahr oder für nicht wahr zu erachten sei. In dem Urteil sind die Gründe anzugeben, die für die richterliche Überzeugung leitend gewesen sind.

(2) An gesetzliche Beweisregeln ist das Gericht nur in den durch dieses Gesetz bezeichneten Fällen gebunden.

§ 292 a ZPO Anscheinsbeweis bei qualifizierter elektronischer Signatur
Der Anschein der Echtheit einer in elektronischer Form (§ 126 a des Bürgerlichen Gesetzbuchs) vorliegenden Willenserklärung, der sich auf Grund der Prüfung nach dem Signaturgesetz ergibt, kann nur durch Tatsachen erschüttert werden, die ernstliche Zweifel daran begründen, dass die Erklärung mit dem Willen des Signaturschlüssel-Inhabers abgegeben worden ist.

§ 415 ZPO Beweiskraft öffentlicher Urkunden über Erklärungen
(1) Urkunden, die von einer öffentlichen Behörde innerhalb der Grenzen ihrer Amtsbefugnisse oder von einer mit öffentlichem Glauben versehenen Person innerhalb des ihr zugewiesenen Geschäftskreises in der vorgeschriebenen Form aufgenommen sind (öffentliche Urkunden), begründen, wenn sie über eine von der Behörde oder der Urkundsperson abgegebene Erklärung errichtet sind, vollen Beweis des durch die Behörde oder die Urkundsperson beurkundeten Vorganges.

(2) Der Beweis, dass der Vorgang unrichtig beurkundet sei, ist zulässig.

§ 416 ZPO Beweiskraft von Privaturkunden

Privaturkunden begründen, sofern sie von den Ausstellern unterschrieben oder mittels notariell beglaubigten Handzeichens unterzeichnet sind, vollen Beweis dafür, dass die in ihnen enthaltenen Erklärungen von den Ausstellern abgegeben sind.

§ 417 ZPO Beweiskraft öffentlicher Urkunden über amtliche Anordnung, Verfügung oder Entscheidung
Die von einer Behörde ausgestellten, eine amtliche Anordnung, Verfügung oder Entscheidung enthaltenden öffentlichen Urkunden begründen vollen Beweis ihres Inhalts.

§ 418 ZPO Beweiskraft öffentlicher Urkunden mit anderem Inhalt
(1) Öffentliche Urkunden, die einen anderen als den in §§ 415, 417 bezeichneten Inhalt haben, begründen vollen Beweis der darin bezeugten Tatsachen.

(2) Der Beweis der Unrichtigkeit der bezeugten Tatsachen ist zulässig, sofern nicht die Landesgesetze diesen Beweis ausschließen oder beschränken.

(3) Beruht das Zeugnis nicht auf eigener Wahrnehmung der Behörde oder der Urkundsperson, so ist die Vorschrift des ersten Absatzes nur dann anzuwenden, wenn sich aus den Landesgesetzen ergibt, dass die Beweiskraft des Zeugnisses von der eigenen Wahrnehmung unabhängig ist.

§ 440 ZPO Beweis der Echtheit von Privaturkunden
Die Echtheit einer nicht anerkannten Privaturkunde ist zu beweisen.

Steht die Echtheit der Namensunterschrift fest oder ist das unter einer Urkunde befindliche Handzeichen notariell beglaubigt, so hat die über der Unterschrift oder dem Handzeichen stehende Schrift die Vermutung der Echtheit für sich.

§ 126 GBO Führung (des Grundbuchs) als automatisierte Datei
(1) Die Landesregierungen können durch Rechtsverordnung bestimmen, dass und in welchem Umfang das Grundbuch in maschineller Form als automatisierte Datei geführt wird. Hierbei muss gewährleistet sein, dass

1. die Grundsätze einer ordnungsgemäßen Datenverarbeitung eingehalten, insbesondere Vorkehrungen gegen einen Datenverlust getroffen sowie die erforderlichen Kopien der Datenbestände mindestens tagesaktuell gehalten und die originären Datenbestände sowie deren Kopien sicher aufbewahrt werden;

2. die vorzunehmenden Eintragungen alsbald in einen Datenspeicher aufgenommen und auf Dauer inhaltlich unverändert in lesbarer Form wiedergegeben werden können;

3. die nach der Anlage zu diesem Gesetz erforderlichen Maßnahmen getroffen werden.

...

§ 10 a GBO Aufbewahrung auf Datenträgern; Nachweis der Übereinstimmung

(1) Die nach § 10 oder nach sonstigen bundesrechtlichen Vorschriften vom Grundbuchamt aufzubewahrenden Urkunden und geschlossenen Grundbücher können als Wiedergabe auf einem Bildträger oder auf anderen Datenträgern aufbewahrt werden, wenn sichergestellt ist, dass die Wiedergabe oder die Daten innerhalb angemessener Zeit lesbar gemacht werden können. Die Landesjustizverwaltungen bestimmen durch allgemeine Verwaltungsanordnung Zeitpunkt und Umfang dieser Art der Aufbewahrung und die Einzelheiten der Durchführung.

…

§ 8 a HGB Ermächtigung der Landesregierungen; automatisierte Dateien
(1) Die Landesregierungen können durch Rechtsverordnung bestimmen, dass und in welchem Umfang das Handelsregister einschließlich der zu seiner Führung erforderlichen Verzeichnisse in maschineller Form als automatisierte Datei geführt wird. Hierbei muss gewährleistet sein, dass

1. die Grundsätze einer ordnungsgemäßen Datenverarbeitung eingehalten, insbesondere Vorkehrungen gegen einen Datenverlust getroffen sowie die erforderlichen Kopien der Datenbestände mindestens tagesaktuell gehalten und die originären Datenbestände sowie deren Kopien sicher aufbewahrt werden;

2. die vorzunehmenden Eintragungen alsbald in einen Datenspeicher aufgenommen und auf Dauer inhaltlich unverändert in lesbarer Form wiedergegeben werden können;

3. die nach der Anlage zu § 126 Abs. 1 Satz 2 Nr. 3 der Grundbuchordnung erforderlichen Maßnahmen getroffen werden.

...

Bibliography

Becker, Das automatisierte Abrufverfahren des elektronischen Grundbuchs, BNotK-Intern in DNotI-Report 1997/23;

Bettendorf, J.: EDV-Dokumente und Rechtssicherheit, in: Bundesnotarkammer (Hrsg.), Reports by the German Delegation to the XX. International Congress of Latin Notaries, Cologne, 1992;

also.: Elektronischer Rechtsverkehr und Schriftform des Zivil- und Prozessrechts, in: Rheinische Notarkammer/Verein für das Rheinische Notariat e.V. (Hrsg.), Notar und Rechtsgestaltung. Tradition und Zukunft, Cologne, 1998;

also.: Elektronischer Rechtsverkehr in: Erber-Faller (Hrsg.), Elektronischer Rechtsverkehr, Neuwied, 2000;

Bredl, SOLUM-STAR – Das maschinell geführte Grundbuch, MittBayNot 97, 72;

Britz, J.: Urkundenbeweisrecht und Elektroniktechnologie. Eine Studie zur Tauglichkeit gesetzlicher Beweisregeln für elektronische Dokumente und ihre Reproduktion im Zivilprozess, Munich, 1996;

Bundesnotarkammer (Hrsg.): Elektronischer Rechtsverkehr – Digitale Signaturverfahren und Rahmenbedingungen, Cologne 1995;

also.: Conference documentation from the Second Forum on "Electronic Legal Transactions" at the XXI. International Congress of Latin Notaries on 03.06.1995 in Berlin, obtainable from the *Bundesnotarkammer*, Mohrenstraße 34, 10117 Berlin;

also.: Conference documentation from the Third Forum on "Electronic Legal Transactions" on 13.03.1997 in Cologne, obtainable from the *Bundesnotarkammer*, as above;

Demharter, J.: Grundbuchordnung, 21. Auflage, Munich1995;

Erber-Faller, S.: Gesetzgebungsvorschläge der Bundesnotarkammer zur Einführung elektronischer Unterschriften, CR 1996, 375;

also.: Elektronischer Rechtsverkehr und digitale Signaturen in Deutschland. Bisherige Entwicklungen, internationale Bezüge und Zukunftsperspektiven aus notarieller Sicht, in: Rheinische Notarkammer/Verein für das Rheinische Notariat e.V. (Hrsg.), Notar und Rechtsgestaltung. Tradition und Zukunft, Cologne, 1998;

also.: Perspektiven des elektronischen Rechtsverkehrs, MittBayNot 1995, 182;

also.: Berufsständische Projekte des Notariats, in: Erber-Faller (Hrsg.), Elektronischer Rechtsverkehr, Neuwied, 2000;

Frenz, Ein Jahrhundert-Gesetz für die Freiwillige Gerichtsbarkeit, DNotZ 94, 153;

Fritzsche, J./*Malzer*, H.: Ausgewählte zivilrechtliche Probleme elektronisch signierter Willenserklärungen, DNotZ 1995, 3;

Geis, I. (Hrsg.): Die digitale Signatur – Eine Sicherheitstechnik für die Informationsgesellschaft. Ein Leitfaden für Anwender und Entscheider, Eschborn 2000;

Göttlinger, Pilotprojekt Elektronisches Grundbuch: Einsatz in Sachsen, DNotZ 95, 370;

Hammer, V./*Bizer*, J: Beweiswert elektronisch signierter Dokumente, DuD 1993, 689;

Hähnchen, S.: Das Gesetz zur Anpassung der Formvorschriften des Privatrechts und anderer Vorschriften an den modernen Rechtsgeschäftsverkehr, NJW 2001, 2831;

Hontheim, G.: Das Gesetz zur Anpassung der Formvorschriften des Privatrechts und anderer Vorschriften an den modernen Rechtsverkehr, NWB 2001, 3249;
Malzer, H.: Zivilrechtliche Form und prozessuale Qualität der digitalen Signatur nach dem Signaturgesetz, DNotZ 1998, 96;

Nöcker, G.: Urkunden und EDI-Dokumente, CR 2000, 176;

Nowak, U.: Der elektronische Vertrag – Zustandekommen und Wirksamkeit unter Berücksichtigung des neuen "Formvorschriftenanpassungsgesetzes", MDR 2001, 841;

Oertel, K.: Der elektronische Rechtsverkehr in der notariellen Praxis, MittRhNotK, 2000, 181;

Palandt/Bearbeiter, Bürgerliches Gesetzbuch, 63. Auflage, Munich, 2004;

Redeker, H.: EU-Signaturrichtlinie und Umsetzungsbedarf im deutschen Recht, CR 2000, 455;

Römermann, V./*van der Moolen*, M.: Schriftsätze per Computerfax: Willkommen im 21. Jahrhundert, BB 2000, 1640;

Roßnagel, A.: Die Simulationsstudie Rechtspflege. Eine neue Methode zur Technikgestaltung für Telekooperation/Projektgruppe Verfassungsverträgliche Technikgestaltung e.V. (Provet), Berlin 1994;

also (Hrsg.).: Recht der Multimediadienste, Kommentar, Munich, 2003;

Schippel, H.: Die elektronische Form: Neue Formvorschriften für den elektronischen Rechtsverkehr, in: Böttcher/Hueck/Jähnke (Hrsg.), Memorial Publication for Walter Odersky on his 65th birthday on 17 July 1996, Berlin 1996;

Schlechter, R.: Sicherheit im Internet – Grundzüge einer europäischen Rechtspolitik, K & K 1998, 147;

Schmittner, S.: Digitale Signaturen als Herausforderung und Chance, BWNotZ 2001, 107;

Strauch, S.: Rechtliche und archivische Probleme der digitalen Signatur, in: Gedächtnisschrift für Alexander Lüderitz, Munich, 2000;

Ultsch, M: Zivilrechtliche Probleme elektronischer Erklärungen – dargestellt am Beispiel der Electronic Mail - , DZWir 1997, 466;

Rapp, C.: Rechtliche Rahmenbedingungen und Formqualität elektronischer Signaturen, Munich, 2002;

Viefhues, W.: Die digitale Signatur in der juristischen Praxis, ZAP 2001, 1109;

Zöller, Zivilprozessordnung, 23. Auflage, Cologne, 2002.

Annex (Diagrams)

Kommunikationsvolumen mit ausgewählten Kommunikationspartnern

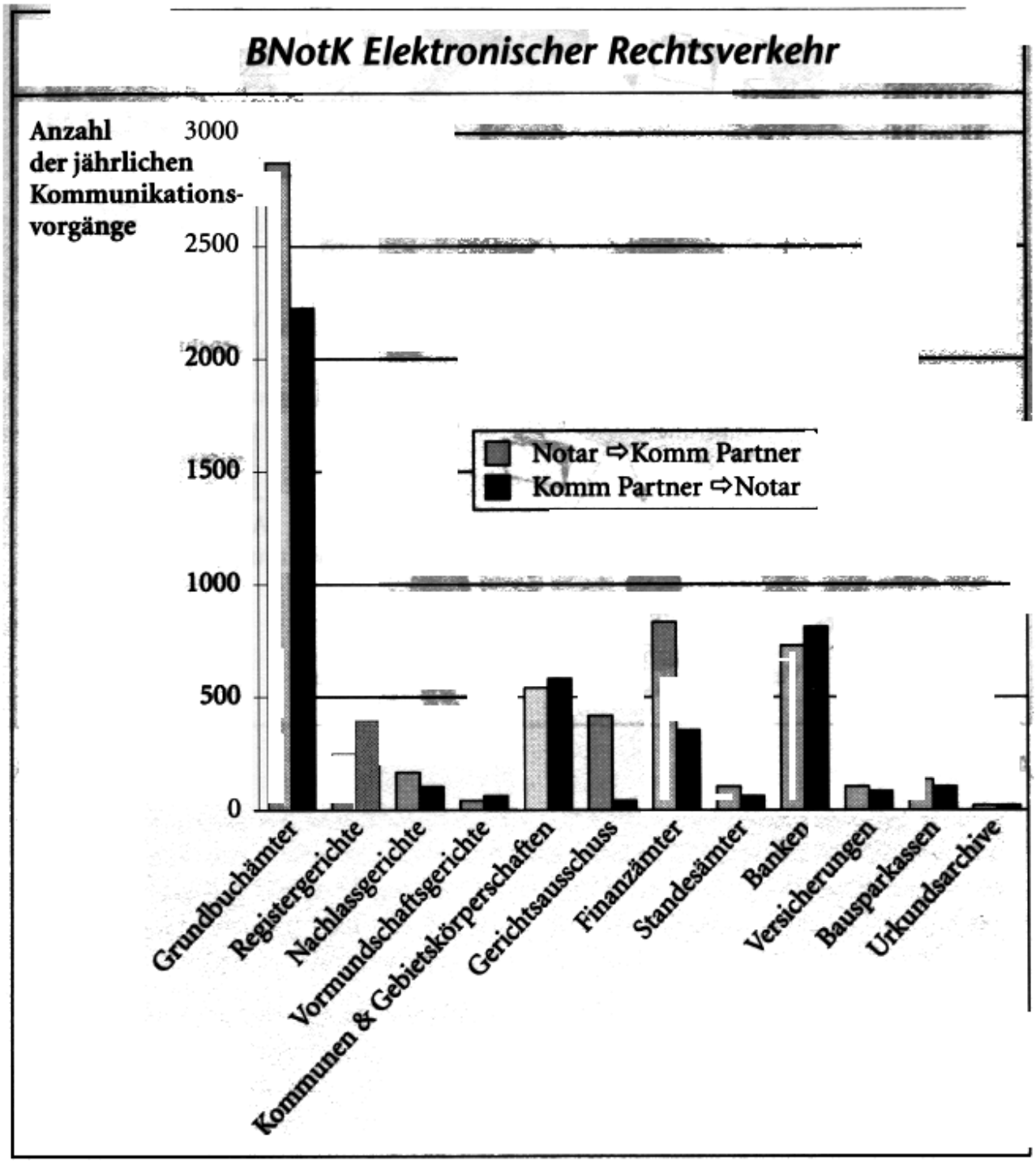

Abb. 1

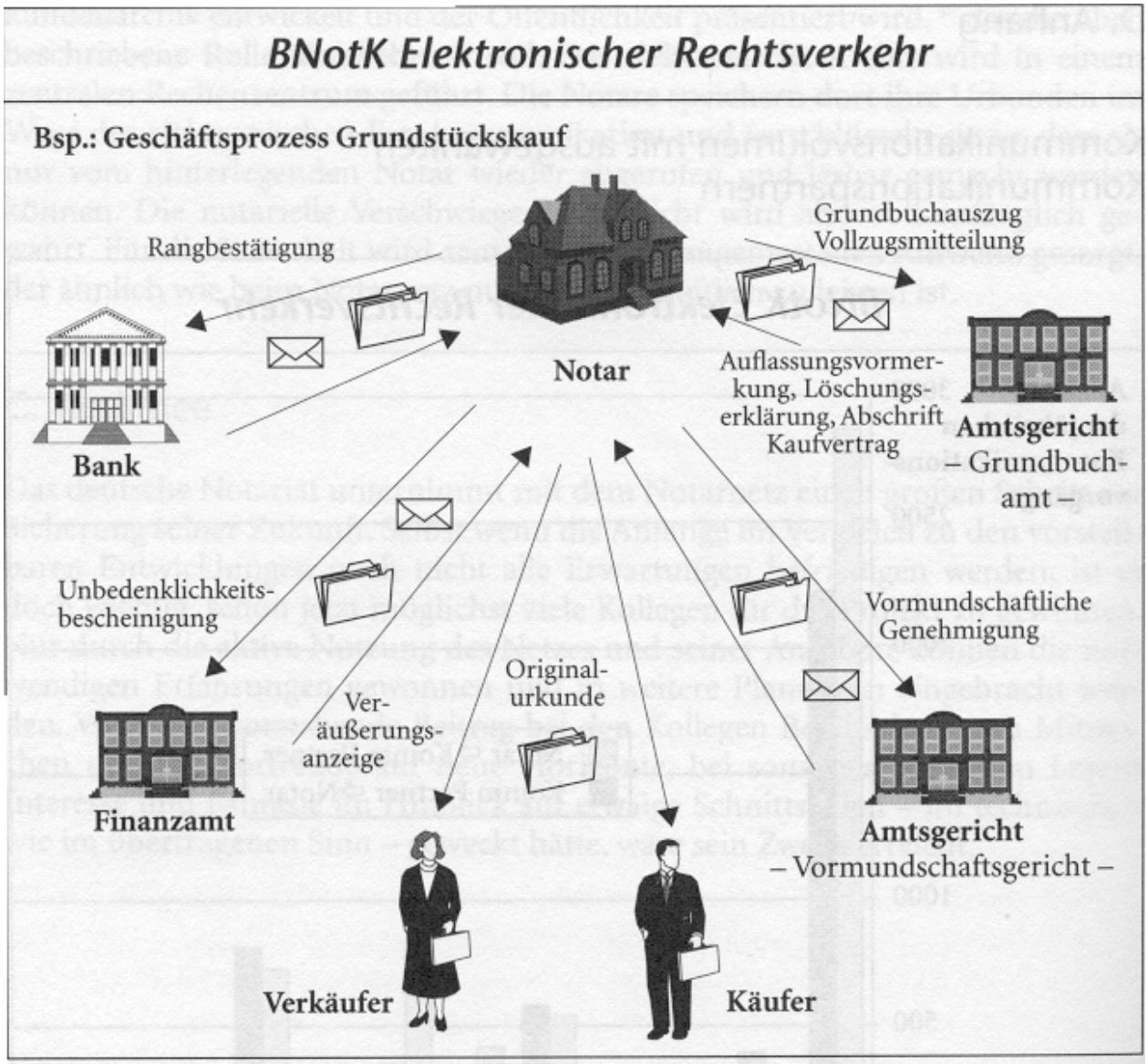
BNotK Elektronischer Rechtsverkehr
Bsp.: Geschäftsprozess Grundstückskauf
Rangbestätigung
Grundbuchauszug
Vollzugsmitteilung
Notar
Bank
Auflassungsvormerkung, Löschungserklärung, Abschrift Kaufvertrag
Amtsgericht
– Grundbuchamt –
Unbedenklichkeitsbescheinigung
Vormundschaftliche Genehmigung
Veräußerungsanzeige
Originalurkunde
Finanzamt
Amtsgericht
– Vormundschaftsgericht –
Verkäufer
Käufer

Abb. 2