Fast, efficient and convenient – that’s how we would like the digital service society to be. Starting 1 November 2010, citizens in Germany will have a new medium for electronic proof of identity and will take an important step towards greater ID security in the online world.

Only a few small details on the outside hint at the multi-functionality of the new German ID card. The technical centre, in the form of a contactless high-security chip, lies inside the document.

High security in miniature format

The new ID card will provide German citizens for the first time ever with a document-based electronic identity that can also be used for private online activities.

To make use of this functionality, a citizen must deliberately choose to activate the electronic functions of the new ID card. Moreover, they must also release their personal data, such as first name and family name, date of birth, address, academic title or pseudonym, if any, during each concrete online application using a personal identification number (PIN).
Security in many layers

Technically speaking, the new polycarbonate card that is centrally produced at Berlin-based Bund­
desdruckerei is designed according to the multi-layer principle. The document chip is embedded
in several layers of security foil placed on top of each other. These individual layers of foil are
irreversibly bonded together in a special production process and using a colour personalisation
method, so that the chip, the printed data and the card body form a self-contained unit. Any
attempt to manipulate the data would involve damaging the material and hence destroying the
document as a whole.

Trust based on reciprocity

According to BITKOM, the German Federal Association for Information Technology, Telecom­
munications and New Media, more than 70 percent of all Germans go online on a regular basis. In
Germany, just like in any other country around the globe, the Internet has become one of the most
important sources of information and social platforms for many people. In order to be able to make
the best possible use of the growing digital diversity, reliable information regarding the identity of
the process participants is becoming increasingly important. At the same time, the sometimes very
complex and error-prone control processes are limiting the efficiency and economic feasibility of
many online applications, not just in Germany, and are resulting in a sheer endless flood of data.

This is all set to change fundamentally when the new ID card is introduced in November 2010.
All new document holders over the age of 16 will have the option to also use the handy card in
ID-1 format – comparable to the size of a credit card – for everyday online shopping, to register
on online platforms and for digital communications with public authorities. This is based on the
principle of mutual authentication, i.e. the user and supplier must identify themselves to each
other and hence clearly prove that they are who they claim to be (refer also to Fig. 3).

More than 170 German companies and institutions who have been preparing their new online
services since October 2009 in various application tests will be ready to start regular business
when the new document is officially launched. Citizens will then be able to experience for them­selves the security and convenience which the new eID card (eID: electronic identity) has to offer.

<table>
<thead>
<tr>
<th>New ID card</th>
<th>Electronic functions</th>
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<tbody>
<tr>
<td>1. Biometrics</td>
<td>• Digital photo and two electronic fingerprints (optional)&lt;br&gt;• Exclusively for authorities entitled to check identities, e.g. police and border control officers</td>
</tr>
<tr>
<td>2. Electronic proof of identity</td>
<td>• For eBusiness and eGovernment&lt;br&gt;• PIN and authorisation certificate required</td>
</tr>
<tr>
<td>3. Qualified electronic signature</td>
<td>• Certificate can be loaded later on the chip&lt;br&gt;• Supplied not by the state, but by the market (pursuant to the Act on Digital Signature)</td>
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Fig. 2: The new German ID card combines the conventional function of the photo ID card with new electronic functions – in handy ID-1 document format