

# Short Summary

## 1.1. Bremen and MEDIA@Komm in Germany

In late 1997, the German federal government initiated a competition called "MEDIA@Komm" for local governments to develop integrative concepts on how to launch innovative electronic services for citizens and business. "Integrative" was understood both from a technological and organizational point of view: the competition called for the use of electronic signatures which were then (and still are) seen as one of the crucial prerequisites for successful electronic commerce, and urged local authorities to cooperate with the private sector.

Out of 136 entries, ten were selected in April of 1998. These cities were funded for half a year to detail and work out the final concept. Of these, the three best concepts were selected in March of 1999: Esslingen, Nürnberg and Bremen. This case study will deal with Bremen, the city which arguably took both aspects of integration most seriously by founding a limited liability company (GmbH & Co KG) with private industry partners and charging it to implement immediately full-scale electronic transactions systems including digital signatures and payments.

Winning the MEDIA@Komm-competition meant that Bremen received almost \$10 million matching funds from the federal government. These funds co-finance the launching phase of the project, which runs until 2002. Within this time-period, Bremen hopes to develop and implement new solutions to deliver public and private services, thus changing the way citizens and business interact with government and private service providers. By the summer of 2001, it had demonstrated practicability of concepts and implemented first pilot systems. As a result, Bremen is becoming a leading edge case for electronic government (and commerce) services, in both a national and an international context.

## 1.2. Strategic Context

First and foremost, developing electronic government appeals to government administrations, companies and the public alike because it is generally understood to mean better and cheaper service. But electronic government is also an economic opportunity. The more obvious reason why this is so is the increasing importance of information technology (IT) in all aspects of business and social life. For cities this means that support of IT industries is crucial for increasing and maintaining wealth and employment in the local region, which is paramount for Bremen.

The less obvious but even more important reason for Bremen to engage in e-government is the reduction in the city's net income due to a decline in the once dominating harbor and steel industries, subsequent unemployment, and redistributions within Germany's complicated system of tax-income sharing between the different levels of government. The immediate challenge for Bremen is to reduce a structural deficit of DM 850 million in its annual budget. It needs to save up to 166 million per year in its operational budget in order to present a balanced budget by 2005. In that year, the Federal government will stop helping Bremen fill the gap in its yearly budget. In this context, electronic government may be a solution which allows Bremen to sustain a sufficient level of service while reducing operating costs.

## 1.3. Institutional-legal context

The most important institutional contexts influencing electronic government concern the organization of the city government and formal requirements for citizen-administration interaction. Bremen is unique because it is not only a local government, but forms (together with the city of Bremerhaven) a city-state. It is Germany's smallest **Land**, as the federal states are called. Every city (and **Land**) is free to organize itself independently. The federal and the **Länder** level have delegated almost all direct interactions with citizens to local administrations, and rarely meet the citizens themselves. However, they remain in charge of the formal requirements.

Being a city-state means that Bremen is able to change laws governing the material content of formal requirements, for example in building/housing and education laws; a right which other cities do not have. However, a rather substantial amount of all regulations for citizen-administration interaction is drafted at the federal level and/or in cooperation with the other states, so that some coordination problems remain.

Electronic transactions in business life and in dealings with administrations have been legally practical for quite some time. However, when functions of authenticity, identification, (data) privacy, integrity, and (non-) repudiation are at stake, electronic equivalents have to be found for "paper-based" systems such as signatures, envelopes, and identity-cards. Because there is a considerable gap in legal expertise as to which technologies reliably deliver those functions, electronic government has been effectively hindered by an array of different and diverging opinions as to what is feasible and what not.

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To address one of the most salient problems, reliance and trustworthiness of electronic signatures, Germany regulated their issuance in 1997. In 2000, the EU-directive on electronic signatures became effective (causing Germany to adapt its older law). At a much slower pace, the administration is now reforming the formal requirements in its many laws, allowing for more uses of electronic signatures in interactions with government. Most significantly, the general laws governing administration processes will introduce a new formal requirement beyond the "written form": the "textform", which can be met by electronic means as well.

With regard to cooperation with the private sector, one needs to emphasize that transactions with public administrations tend to be more complex than (the already comparatively wide spread) banking transactions. Instead of transfers from one account to another, sell-/buy-orders, or credit card debits one needs to support multi-step, time-distributed, and multiple-partner processes, such as an application for socially-assisted housing or starting a company. Many of these transactions include public and private sector organizations being subject to private and public law at the same time.