

IT and Telecommunications Policy Report 2008

The Danish Government
March 2008

IT and Telecommunications Policy Report 2008

The Danish Government
March 2008

Contents

Minister's Preface	5
Forward-looking e-government	6
Digital infrastructure in the international class	8
Future digital skills	13
Safe and secure use of ICT	15
Valuable digital content and new possibilities	17

Minister's Preface

Information and communication technology (ICT) is an important element in making Denmark a society of opportunities. A society in which everyone is able to create a good life in a secure environment with a global outlook.

It is possible for us to communicate globally independent of time and place. We can do banking business whenever we wish, and by technological means we can organise our work more efficiently to suit individual needs.

But we can do even better.

ICT will play a key role in meeting the challenges, we are facing in the years to come. This includes issues such as:

- > Digital solutions should add value to the individual user
- > Usability should be in focus rather than the technology
- > ICT will be proactively in new solutions and structures.

Flexible digital solutions can give an overall quality boost to e-government in the public sector. Developments these years are in a decisive phase, with digital solutions being merged and integrated across the sector.

I believe that we should focus on the need of the individual even more than today and become better at promoting the solutions that we know will work.

ICT is much more than administration and digital self-service solutions. By using the digital potential innovatively, it is possible to create products and solutions that may help citizens in their everyday lives - both in their private life and in their worklife. For instance, this may contribute to relieving nursing and healthcare staff in the public sector.

It may also be solutions that contribute to handling the environmental and climatic challenges facing us in the future. This applies, especially to intelligent energy and traffic systems and in relation to controlling the consumption of resources in private enterprises and homes.

Our IT and Telecommunications Policy Report for 2008 takes stock of some of the key initiatives and achievements in the ICT area in 2007.

Helge Sander
Minister for Science, Technology and Innovation

Forward-looking e-government

Digital technologies have opened up new possibilities in Denmark and the rest of the world. These developments provide a solid basis for continued growth and prosperity. Denmark ranks among the very best in the world in terms of digital development, and was nominated in 2007 as the world's best nation within information and communication technology (ICT) in the World Economic Forum's Global Information Technology Report.

Denmark's outstanding levels of networked readiness have to do with the country's excellent regulatory environment, coupled with a clear government leadership and vision in leveraging ICT for growth and promoting ICT penetration and usage.

Source: World Economic Forum

ICT can play a key role in meeting the challenges that Denmark will be facing in the years to come. ICT will contribute to a future-proof course of development, where new technologies are brought into use in an integrated manner.

ICT plays an important role in putting people first rather than systems, and focus on users. The continued development of digital portals such as borger.dk (citizens) and virk.dk (business) provides a clear framework for a cohesive digital development across the public sector. This applies for instance to the ability of citizens to access their own personal data at public authorities and to offering public digital services in a flexible manner.

During the fourth quarter of 2007, there were more than 74,000 visits a week to borger.dk, as against 66,000 visits during the second quarter of 2007. Equally, there was a large increase in the use of virk.dk, where the number of reportings rose from about 238,000 in 2006 to just over 598,000 in 2007.

Source: National IT and Telecom Agency and the Danish Commerce and Companies Agency

In June 2007, the Government presented a common public e-government strategy with 35 concrete initiatives. The initiatives are to create improvements in services for citizens and businesses. The initiatives are intended to promote efficiency and move resources from administrative tasks to citizen-related services. The goal is that by 2012, at the latest, it should be possible to exchange all relevant written communication digitally with citizens, while this will be a requirement in the case of enterprises. The initiatives are also intended to ensure that digitalisation efforts in the public sector will be coordinated and prioritised through wider and binding cross-governmental collaboration at all levels.

Danish enterprises are to use ICT innovatively in order to remain competitive. This is a basic condition for growth and prosperity. In consequence, the Government's globalisation

strategy is focusing on ICT developments, and in 2007 a number of initiatives were presented that aim to give Danish enterprises the best possible framework for progress and dynamism. This applies for instance to the NemHandel initiative (literally Easytrade) which, together with the opening of an e-business centre (known as the IBIZ Centre) in Århus, is to ensure Danish enterprises a competitive edge on the rest of the world in relation to e-business. The NemHandel initiative makes it just as easy for an enterprise to send an electronic invoice as to send an e-mail.

The physical infrastructure of the future has been mapped by the Infrastructure Commission based on the vision, that traffic systems should support growth and create coherence between the requirements expressed by citizens and businesses, taking due account of climatic and environmental conditions. The same vision applies to the digital infrastructure, which is a precondition for all Danes being able to make use of the digital potential.

Today, broadband is available to more than 99 per cent of citizens and businesses. This means, that only about 23,000 households and enterprises are without access to broadband. Last year, the corresponding figure was about 44,000. The objective is clear. Everyone should have access to broadband by the end of 2010.

In order for the digital potential to be utilised in full, it is a condition that the users should feel confident and secure when using such offerings and that relevant content is provided via the digital services.

In 2007, tenders were launched for the future management of digital signatures. The invitation to tender focuses on higher security, better mobility and greater usability.

With a number of initiatives in 2007, emphasis has been placed on developing the infrastructure and telecommunications market in Denmark. The initiatives include a strategic review of telecommunications regulation, a supplementary political agreement on new general principles for spectrum management in Denmark, and setting focus on Next Generation Networks, which means, in simplified terms, that radio/TV and telecommunication are supplied in the same way as the Internet. To the citizen, this means that in principle one telecommunications service will be enough for covering most needs.

ICT is part of the solution to environmental and climatic challenges. This can be seen already today, where the ability to imbed intelligence in products can reduce resource spending significantly and optimise the use of resources in other contexts, for example wind power.

But the potential is much greater. It has been announced, that up to the UN Climate Summit in Copenhagen in December 2009, special focus will be put on how "Green IT" can contribute to intelligent solutions and be the source of new types of organisation and how the use of ICT can be more environmentally friendly in itself.

Digital infrastructure in the international class

The Government aims to ensure that all Danes should be able to benefit from the potential in a digitalised Denmark. This requires broadband access for all citizens. That goal is best achieved by fair and effective competition in the telecommunications market between different technologies.

In consequence, an auction was held in 2007 for wireless broadband (FWA frequencies), which included an obligation to cover areas in Denmark where it is not possible to get broadband today. The price for the licence, which is valid until January 2022, was DKK 117 million.

In international benchmarking, Denmark ranks at the top of OECD's survey of broadband penetration, having 34.3 broadband subscriptions per 100 inhabitants. In 2007, 83 percent of the population had Internet access from their home, and of these, 92 percent had a broadband connection.

The number of broadband connections continues to rise. For example, there is a rapid growth in the number of fibre connections, which rose by 46 per cent to about 43,000 during the second half of 2007. Simultaneously with the increased rollout and take-up, the general trend of developments implies increasing speed and falling prices. The share of broadband connections of at least 2 Mbit/s (downstream) has risen from 42 to 70 per cent over the last year. In early 2008, a 2 Mbit/s connection cost DKK 249, while the price for the same connection was DKK 378 in early 2007. However, international benchmarking shows that there is still room for improvement, not least in terms of speed and prices.

There are also other challenges to be met. In recent years, Internet users have developed from being predominantly passive recipients to being active players to a far higher degree, creating digital content and placing their own user-created music, images and films on the Internet. This means new demands on the speed at which user data can be transmitted (upstream). Today, a large proportion of Danish broadband connections are asymmetric, with a larger transmission speed towards the user than from the user. As a result, the user needs a longer time to send images, videos etc. than to receive them. In addition, new services, including the use of peer-to-peer technology, make demands on transmission speeds both to and from the user.

A special focal point in 2007, was the importance of upstream speeds and developments are followed closely, also taking account of the fact that the users' active participation in creating content will promote innovation, creativity and social relations for the benefit of all concerned. In 2007, for the second year in succession, it was decided to reduce TDC's wholesale prices for broadband connections (Bit Stream Access), especially for connections with high downstream speeds to users, prices in rural districts, and the initial charge for establishing broadband connections. This will support the competitive situation and create the foundation for lower prices for higher downstream speeds.

On the OECD broadband portal, Denmark ranked as number 19 in 2007 in terms of the price in US dollars per Mbit/s (17.7 dollars). Japan was at the top, with a price per Mbit/s of only 3.09 dollars, followed by France (3.7 dollars) and Italy (4.61 dollars). 11 OECD countries had a higher price per Mbit/s than Denmark, including Sweden and Iceland. In relation to the average subscription price for broadband, Denmark ranked as number 7, which is better than France, Italy, Netherlands and Korea. Denmark is surpassed by countries such as Finland, Germany and Japan.

Source: OECD Broadband Portal

The technological development implies a constant merging of networks, services, terminals and markets. Such merging, or convergence, may lead to new products and business models for the benefit for everyone. But it is a condition that the right framework conditions should be present in the form of coherent and coordinated regulation of the infrastructure and provision of services.

In 2007, a strategic review of existing telecommunications regulation was undertaken to determine if the overall framework conditions for the area could be improved so as to strengthen innovation and promote investments. Following the review, it was concluded that in general the existing framework may be regarded as supportive of the providers' incentives to compete in the telecommunications market. However, the review also points out a number of areas in which adjustment of the regulation should be considered in order to improve the framework for innovation and investments in the market. To a relevant extent, the results of the strategic review will be included in the work to revise the EU legal framework for electronic communications, a draft of which was published by the Commission in November 2007.

The use of frequencies for TV, broadband and telephony etc. is becoming increasingly important in Denmark as more and more services become wireless. As a result, the existing Frequency Act is under revision, and in June 2007 a political agreement was concluded on future spectrum management. With this revision, it will now be easier for market players to use the frequencies freely for such purposes as they think fit, and also trade the frequencies. Analyses show that the new rules provide scope for societal gains of as much as one billion DKK annually. The new Frequency Bill is expected to be introduced in October 2008 and planned to come into force on 1 January 2009.

Mobile telephones, in particular, have come to play a key role in everyone's life. Today there are more than six million mobile subscriptions in Denmark, and in line with the increasing popularity more and more functions are being integrated in mobile telephones. This includes features such as mobile broadband, mobile TV, GPS, music players, cameras, and using the phone as a means of payment.

The number of 3G mobile subscriptions rose by more than 100 per cent from 2006 to 2007, when the number reached about 490,000. At the same time, data transmission via mobile telephones increased sixfold, from 13 million megabytes in the first half of 2006 to 79

million megabytes in first half of 2007. Finally, SMS, which may also be used for sending reminders from authorities and institutions to citizens, is becoming increasingly widespread for communication. In the first half of 2007, users sent 5.8 billion SMS - an increase of nearly 11 per cent compared with the second half of 2006.

Up to now, the use of mobile telephones abroad has been relatively costly. As a result, Danes who have brought their mobile telephones abroad have often been unpleasantly surprised when receiving their telephone bill. This is because of the charges for what is known as international roaming, i.e. the price for receiving and making a call when located in a country other than one's own. Something was done about this in 2007. With strong support from the Danish Government, a regulation was adopted by the EU, which means that prices for calling from mobile telephones between EU countries have fallen by 50 per cent. On the part of Denmark, efforts are being made to extend the scope of the regulation to include SMS, MMS and other data services (data roaming).

Internet domain names are an important part of the Internet infrastructure. It is therefore important that there should be a fixed and secure framework for Internet domain names. At the end of 2007, the administration of the Internet domain .dk was put out to tender. The invitation to tender aims to promote a dynamic and high-quality development within the Danish Internet community and to appoint an administrator which will meet the overall requirements of the Domain Act. The deadline for submitting tenders was 1 April 2008.

The prices charged by TDC, Telia and Sonofon from other telecommunications companies for receiving traffic in the mobile networks of these three companies are subject to price control. This is based on an international comparison. Such price control systems are intended to ensure a fair and effective telecommunications market for the benefit of the users, who will then be able to call mobile subscribers at lower rates. The present control model, which will be replaced by a new method from 1 January 2009, has resulted in the previous price level of DKK 1.04 being lowered to DKK 0.72 per minute by the end of 2007, to be followed by a gradual reduction until 1 May 2008, when the rate will be DKK 0.62 per minute.

To ensure that the Government will be successful in implementing its' goal that the digital potential should be utilised in the best possible way, the public sector is to provide better, more coherent and effective digital services to citizens and businesses. In cooperation with Danish Regions and Local Government Denmark (LGDK), the Government has therefore launched a common public e-government strategy entitled "Danish E-Government Strategy 2007-2010", which aims to realise these ambitions and ensure Denmark a leading position globally within e-government.

DKK 270 million has been allocated for implementing the three main priority areas of the strategy: Better digital service, increased efficiency, and stronger collaboration. A joint public steering group consisting of Government Permanent Secretaries and the Managing Directors of LGDK and Danish Regions is in charge of current follow-up on the strategy.

In October 2007, the Government, LGDK and Danish Regions made an agreement on mandatory use of seven sets of open standards for software in the public sector for new solutions. Widespread and recognised open standards promote competition and free choice among several manufacturers and suppliers in an area where a variety of IT systems and components are to play together.

At the same time, it will be more manageable to modify tasks and organisational arrangements without having to replace ICT solutions. Overall, such mandatory use of open standards for software in the public sector provides a potential for higher efficiency and better task management, resulting in more cohesion across sectors for the benefit of citizens and businesses.

There is a common interest among public authorities, suppliers and interest organisations in improving the capability of implementing IT projects. One of the means to achieve this is to increase the maturity of an organisation to carry out IT projects successfully. A high maturity level increases the probability, that project deliverables will generate the desired utility value, while the risk of budget overruns and project failures is diminished.

In consequence of this, the Ministry of Science, Technology and Innovation in 2006 prepared a model to be used for assessing the maturity of IT suppliers and public authorities. In 2007, further work was done to ensure deployment of the model. The first suppliers have been maturity tested according to the model. The model has been incorporated in the standard contract for longer-term complex IT projects (known as K02), where it is possible to let maturity be included as an award criterion for both the customer and supplier. K02 was published in November 2007, and in 2008 a number of follow-up activities are to be launched in cooperation with the Danish IT Society and the Danish IT Industry Association.

NemHandel is a common open standard making it possible for users to trade electronically across business sectors and industries. From the launch of NemHandel in October 2007, the entire public sector has supported the receipt of NemHandel invoices. The common open standards mean that IT suppliers are free to incorporate the NemHandel technology in their existing solutions or entirely new solutions. The integration and coherence supported by NemHandel demonstrate the strength of open standards.

A National Knowledge Centre for Software was established for a three-year period in April 2006 to support the Government's software strategy, including the development of open source software in the public sector. One goal for the Centre is to ensure that the public sector will only pay for the development of a software product once, and that the dependence on a single supplier is reduced. In March 2007, the Centre established a software marketplace on softwareboersen.dk which, by the end of 2007, offered 26 open source-projects that may be used freely by everyone.

It is a key task for the new innovation centre for e-business in Århus (known as IBIZ) to establish a start-up scheme in cooperation with private e-business advisers. The scheme is to make it more secure for small and medium-sized enterprises to gain the initial experience

with consulting assistance for e-business, including strengthening the knowledge of standards such as NemHandel. IBIZ has been established as a joint project between the two Approved Technological Service Institutes (known as GTS Institutes): the Danish Technological Institute and DELTA (Danish Electronics, Light & Acoustics). The Danish Council for Technology and Innovation (DCTI) has allocated DKK 21 million to fund the Centre for the period 2007 to 2010.

In 2007, the Minister for Science, Technology and Innovation approved the Alexandra Institute as a new Approved Technological Service Institute to focus on Pervasive Computing - "ICT in everything".

Future digital skills

Denmark should benefit from the digital potential. This requires citizens to have the necessary competencies and skills to use digital technologies for navigating in the knowledge society, and business enterprises must have access to the ICT competencies necessary to remain successful in the international competition.

When studies started in 2007, the supply of higher education in ICT at Danish universities had been strengthened with nine new programmes. The increased supply was rewarded by the young people. The overall intake for university ICT programmes rose by 24 per cent from 2006 to 2007. This means that Denmark can look forward to an increased supply of highly educated ICT people within the foreseeable future. However, it is important to continue the dialogue on how we may strengthen this positive development further. In the longer term, there will be an increasing need for staff with higher ICT qualifications, and special funds will therefore be allocated to secure the inflow of people with an ICT education. The range of ICT programmes offered by the universities is further strengthened by the fact that in 2007 the Accreditation Council (ACE Denmark) approved yet another university education within ICT.

In June 2007, the Government published a national strategy for e-learning. The purpose of the strategy is to increase the usage and quality of e-learning in Denmark so as to strengthen the general efforts to develop the Danes' skills and competencies. In September 2007, the Government announced a pool for developing e-learning universes aimed at children and young people. The pool focuses on the development of spare-time universes that involve the media habits of children and young people for learning purposes within sciences and languages. To ensure more widespread use and higher quality of ICT-supported learning at the universities, the Government has allocated pool funds for ICT-supported learning projects in its national strategy. Support is granted to the development and readjustment of ICT-supported learning programmes, including e-learning, and the universities may apply for funds in 2008.

To follow up on the strategy, a working group will also be established, to come up with proposals for strengthening the ICT and educational competencies of university teachers. Finally, the launch of the strategy was followed up by a conference on ICT-supported learning at the universities in February 2008.

There is a great demand for more ICT manpower. Besides the general demand, there is also a wish for wider employment of women in the ICT area. Among the possibilities of meeting this demand is to upgrade the skills of employees who have a short-cycle IT education. Furthermore, the Government has presented a plan for international recruiting, proposing that it should be easier for well qualified foreigners to be admitted to work in Denmark. The Government intends to reduce the maximum amount allowed in the job card scheme; enlarge the positive list of the scheme; and introduce a growth list as a supplement to the positive list. To this end, it is proposed that the Green Card scheme should be extended and that a corporate residence permit should be introduced, allowing foreigners to

move between the branches of a group of companies in Denmark and third countries. In order to attract and retain foreign researchers and key staff, it is proposed to extend the researcher tax scheme, making it possible to choose between three years at 25 per cent taxation or five years at 33 per cent.

The Government's aim is that ICT should be available to everyone. This applies, not least, to citizens with disabilities, where functionality and usability are essential in connection with digital technology.

As an element in the agreement between the Government, LGDK and Danish Regions on the use of open standards for software in the public sector, it has been mandatory for public authorities, from 1 January 2008, to ensure that new websites are accessible to citizens with disabilities. At the same time, guidance activities will be strengthened, and web-based instructions will be published, which will make it easier to design accessible websites. Public websites will be tested once a year for their accessibility. The results for each individual website will be published on itst.dk.

In 2007, the Ministry of Science, Technology and Innovation launched an IT skills barometer to monitor the Danes' IT skills on a current basis. The most recent measurement shows that two out of three Danes have good or very good overall IT skills. But it can be even better.

In December 2007, the Ministry of Science, Technology and Innovation announced five new dedicated initiatives for about DKK 11 million, focusing on groups with low IT skills. The initiatives will be launched in the course of 2008 and primarily aim to develop the IT skills of the low-skilled groups, for example by demonstrating the potential of using ICT in everyday life.

The establishment of it-borger.dk (Citizens' IT Portal) in 2007 has created a combined access point for information and tools bearing on IT and telecommunications. Among the tools made available by it-borger.dk are a self-test on the IT skills barometer, a broadband tester, and the telecommunications guide.

The telecommunications guide allows citizens to compare the prices and terms of telecommunications companies with reference to their own situation. With the broadband tester, citizens can measure their own broadband speed.

Safe and secure use of ICT

The potential for communicating digitally is being increased all the time. This is also true of the population's ability to use the digital potential. But the use of digital solutions depends on citizens feeling safe and secure when using them. This calls for development of a secure infrastructure; having clear rules for handling of digital information and services; and dedicated information on how to navigate safely and securely on the Internet when using the many digital solutions.

Digital signatures are an essential element in ensuring safety and security in the use of digital solutions. Digital signatures enable users to encrypt personal information, ensuring that personal data is handled in a manner that will maintain protection of privacy.

> Digital signature number one million was issued in June 2007. By the end of 2007, about 50,000 signatures more had been issued.

> Source: National IT and Telecom Agency

In 2007, digital signatures were further developed to include mobile use. With a mobile digital signature, citizens have even better facilities for communicating safely and securely with the public sector and the private enterprises that use the signature. The still increasing take-up of digital signatures demonstrates that more and more citizens and businesses wish to avail themselves of the possibility of secure digital communication.

The next generation of digital signatures will be launched in the course of 2008. Key requirements for the new digital signatures are increased security, usability and mobility.

The work for protection of privacy in a digitalised world should be adjusted continuously in line with current developments. The four working groups of the Privacy Forum - a forum appointed by the Government in 2006 with open participation - in 2007 developed ideas and recommendations that may contribute to ensuring that the use of ICT is made with due consideration for the necessity to protect privacy. On the basis of this work, a catalogue was produced in late 2007 with ideas for protection of privacy.

Increased safety and security should also be created via targeted information. In October 2007, the NetSafe Now! campaign set focus on the security of senior citizens on the Internet. The campaign was arranged jointly between public and private parties. The campaign had more than 23,000 participants in the various campaign activities.

In 2006 and 2007, the IT Security Panel gave advice to the Ministry of Science, Technology and Innovation on IT security aspects that may promote a general IT security culture, thus contributing to increased security and confidence in the use of IT. The Panel's

mandate expired at the end of 2007. The Panel was an example of increasingly closer cooperation within the IT security area.

Regrettably, the Internet is still being used for illegal purposes such as distributing child pornography. To strengthen the fight against child pornography on the Internet, a joint committee of government officials has been appointed, to present an action plan in the second quarter of 2008.

It is important to be able to meet the challenge of ensuring confidence in the IT systems and digital infrastructure that serve as a foundation for our modern welfare society. It is essential to the day-to-day work of authorities and businesses that they have constant and secure access to the Internet. IT security in the government sector must therefore be a top priority.

To increase government IT security, government institutions were expected to implement the common standard for information security, DS 484, by the end of 2006 at the latest. In the first quarter of 2007 it was examined how far the institutions had got with this work. The examination showed that in overall terms the implementation has proceeded satisfactorily. In the years ahead, further work will be done to develop a strong basis for mutual confidence in the public sector, using means such as guidelines, workshops and gaining best practice experience.

Valuable digital content and new possibilities

Digital content is the element that provides value and new opportunities for the individual user. In "Danish E-Government Strategy 2007-2010", the Government has therefore stressed the importance of digital solutions being established with due consideration for the users. It must be solutions that can be used in the everyday activities of citizens and businesses.

Denmark has a position of strength within the development and use of mobile content services and production of services offered on the Internet. In the next few years it must be expected that the use of content services will grow considerably - not least because of the increased use of social networks via digital facilities and Internet-based computer games.

The launch of borger.dk (Citizens' IT Portal) has established a combined access point for public digital information and self-service. Borger.dk gives access to information and self-service across the public sector. In this way, borger.dk serves as a centralised entry point to all citizen-directed digital services from the public sector. At the same time, borger.dk will help ensure that digital solutions and content on borger.dk can be made available on the authorities' own websites.

The Government, Danish Regions and LGDK have decided that there should be an extensive upgrading of borger.dk which will enable every citizen to have a "My Page" based on a common public log-in solution. "My Page" will provide an overview of, and access to, public self-service solutions and content relevant to the individual citizen. This may be for example a change of address, an application for changing one's doctor, or having one's child admitted to day care etc. In 2008, borger.dk will also be launching digital "citizen themes" where public authorities work together across sectors to develop coherent digital solutions based on citizens' concrete everyday needs.

Digital communication with businesses should also proceed as easily as possible. To that end, virk.dk (Business Portal) will be further developed to include a "My Page" for businesses in line with "My Page" on borger.dk, allowing each individual enterprise to select relevant digital solutions. In the health area, citizens also have easy and fast digital access in the form of sundhed.dk (E-Health Portal).

Since 2001, the "Top of the Web" contest has been held annually. The contest is an element in ensuring easy access to public digital services and promoting the development of public websites. This is done by evaluating a large number of number public websites within categories such as digital self-service, usability, accessibility and openness. "Top of the Web" has an aim different from, and wider than, the annual accessibility test of public websites.

Although Denmark is one of the leading countries within ICT, it is important that we should not be content with the level we have reached, but also focus on how to provide new ICT potential in the future. For that reason, the Government is working to strengthen

Danish ICT research. For instance, Denmark's core strengths within ICT research and development may be used for increasing the potential for international collaboration, ensuring that Danish knowledge environments may attract foreign financing etc.

The Danish Council for Strategic Research will allocate pooled funds from the research reserve, where DKK 70 million can be applied for in 2007 and 2008 for research in Pervasive Computing ("ICT in everything"), e-government and effective service delivery. In 2007, four grants were given from this pool, totalling about DKK 29 million.

For the period 2005 to 2008, DKK 277 million has been allocated for research in cross-functional use of nano-, bio- and ICT technologies under the Danish Council for Strategic Research. In 2007, this resulted in five grants totalling about DKK 43 million for projects clearly dedicated to ICT research.

Under its 7th Framework Programme, the EU has allocated well over nine billion euros for ICT research during the period 2007 to 2013. In 2007, funding for about one billion euros was offered, of which Denmark applied for 1.28 per cent of the funds. The Government aims to promote research, and is consequently working to double the Danish benefit from the Framework Programme. If this is to be achieved, it is necessary that the number of applications from Danish researcher groups and enterprises for projects under the ICT programme should be increased.

The IT Greenhouse "5te" (*Fifth*), housed at the IT University, facilitates collaborative projects and activities designed to create growth and innovation on the basis of the core competencies possessed by Danish research in the IT area.

As for mobile TV, the EU Commission in 2007 took steps to add DVB-H to the list of standards in the area of electronic communications networks and services. In the tender for digital TV in Denmark, where the "beauty contest" method has been adopted for selecting a bidder, it has been made a criterion whether the gatekeeper will offer mobile TV according to the DVB-H standard.

In June 2007, the group of political parties behind the media agreement and the agreement on telecommunications made an agreement with the Government on the overall deployment of the eight nationwide digital transmission networks (MUX). The digital transmission networks can be accommodated on the transition from analogue to digital broadcasting technology in October 2009. The agreement means that six MUX will be deployed for digital TV, of which one is to be used for test and research purposes for a limited period of one year from 1 November 2009 to 31 October 2010. In addition, two MUX are held in an innovation reserve so as to ensure that Denmark is well prepared to meet technological changes and will have a versatile and innovative media and communication society in the future.

Print:
ISBN 978-87-92311-29-0

Internet edition:
ISBN 978-87-92311-30-6