Summary

I have been assigned with the task to map and analyse the situation for digital distribution of radio in Sweden and in other countries. The Government has stated in my terms of reference that the second stage of the commission's work will be to analyse the future possibilities for digital radio and that such an analysis will require parliamentary representation. The Government intends to clarify the scope of the analysis and such parliamentary representation. Against this background my report does not include proposals in a traditional sense. However, every chapter includes my comments on the experiences so far.

Digital technology for distribution of radio can lead to a more efficient use of radio spectrum, but in the short term digital radio will require new frequencies to be found within an already heavily packed radio spectrum. It is however possible to coordinate more frequencies for digital radio in Sweden if deemed necessary.

Future radio will be distributed on many competing platforms, such as Eureka 147 DAB, DVB-T, satellite radio, Internet radio etc. There are similarities between the different technologies, but they are all created for different purposes, interests and markets, and they therefore differ in important aspects. For radio, terrestrial distribution will probably be the main platform also in the future, due to the fact that radio listening to a large extent is mobile.

The experiences of DAB in Sweden are limited. One obstacle has been the fact that only the public service broadcaster Swedish Radio (SR) has been broadcasting since 1995. No private broadcasters have participated. Therefore digital radio has had limited programming, which for obvious reasons has led to low consumer interest. However, the range of Swedish digital radio broadcasts is probably of less importance for the development of DAB in a broader perspective. More important is the fact that

DAB has been hindered by the lack of affordable receivers, which is the case also in other parts of the world.

Trials with digital radio is being carried out in many countries. The only countries that appear to be choosing other systems than Eureka 147 DAB are USA and Japan. Digital radio is, however, still in a very early stage of development. There is no market where receivers have been bought by more than a few tens of thousands of people. More or less everywhere digital radio can be characterised as trials with limitations on coverage, limited number of broadcasters and often with temporary regulation. The question of whether it will be possible to switch from analogue to digital radio in the future has not been given priority in any country.

Swedish broadcasters in principle support the introduction of digital terrestrial radio. For SR the interest lies mainly in the opportunity to widen the company's programming by using more channel space than in analogue radio. SR also sees opportunities in increasing listener choice by developing new services. SR assumes that the company will be given extra resources both for distribution and for programming in digital radio.

Private commercial radio stresses that the business must be given better conditions for its analogue services, e.g. by a drastic reduction of concession fees. Without this the industry does not seem prepared to invest in digital radio. Private radio also wants to see the introduction of a national commercial multiplex. In return commercial operators claim to be prepared to start broadcasting digitally and increase their commitment to produce unique and local programming. Community radio has not yet been part of the discussions on digital radio but representatives of broadcasters underline that the needs of community radio must be catered for when introducing new means of distribution. There are also other players on the market that have shown an interest in digital radio, more specifically in capacity for distribution of other services. A common concern for these players is that the opportunity to acquire such capacity should be available on equal terms for all applicants.

The main problem for DAB so far is the lack of receivers at reasonable prices. Even though there are signs that the number of receivers are increasing on some markets, this is still the main obstacle. Experiences from other countries imply that even if the trials in Sweden would have included commercial broadcasts, there would not have been much more receivers on the market than

today. When it comes to the readiness of the manufacturing industry to launch receivers on a large scale, the situation in small countries like Sweden is probably of less importance.

Another difficulty for digital radio is the lack of clear business models. Radio is basically a free-to-air medium available free of charge for the listener. The challenge for the public to buy new radio receivers over time is enormous, probably more important than for TV. The economic life span of a radio receiver is generally longer than that of TV sets. Furthermore, the average household must buy more radio receivers than TV sets. The manufacturing industry and WorldDAB is of the opinion that the regulative frameworks of all European countries should be made more attractive and harmonised in order to encourage DAB development. They also believe that the European Union should strive for a coordinated timetable across Member States for analogue switch-over.

My comment is that the question of the prospect of an analogue switch-over in Europe is probably premature. Moreover, the odds of achieving a harmonised framework for all EU Member States on this issue, can be judged to be highly uncertain. The Commission has previously been known for a high degree of caution when it comes to supporting individual technological projects. If this is what it would take for the industry to produce receivers on a large scale, then digital radio is facing a greater challenge than we have previously believed.

The costs for digital distribution on a larger scale than during the trials are only known as estimates. However, it is possible to conclude that it is costly to reach the whole country with radio broadcasts. This is already true for analogue radio and it will be even more true for digital radio. Distribution of DAB will mean considerable costs for participating broadcasters. For SR the costs will be higher than the company's costs for analogue distribution. For television it is the other way around. Public broadcaster Swedish Television will probably be able to reduce the company's costs by half after a future analogue switch-over. One factor that makes DAB a more expensive technology is that it requires more transmitters to achieve good receiving conditions in all situations.

The present financial scope for more radio in Sweden must be regarded as limited. The probability that different players in the long run will be able to invest in the new technology will therefore rely on the preconditions of the system to be created. Even though

digital technology can increase the capacity of the current radio system this will of be of less importance compared to the challenges. The costs of running successful media companies will most likely increase over time, e.g. through rising costs for attractive programming and copyrights etc. The developments are also limited by the possible proceeds on the market.

Both public service radio and commercial radio face limitations concerning future income. The prospects for community radio to invest in digital radio are small. The possibility for SR to get more income from the license fee system must be judged in relation to other public service broadcasters, i.e. with regard to the needs of Swedish Television and Swedish Educational Broadcasting Corporation. An increased broadcasting undertaking for SR must also be judged in relation to other tasks for the company.

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Radio is one of the most important mass media in society. An important part of media policy must therefore be to safeguard radio and to create good working conditions for the radio medium also in the future. An integral part of Swedish radio is the combination between a strong public service radio, a competitive commercial radio and a vital, often non-profit, community radio.

Even though it is not the first time that radio stands before a development of its distribution technology, there are differences between today's situation and the introduction of FM in the 1950's. It is also the first time a shift of technology would have to be made with the participation of commercial players who are directly dependent on large audience shares for their survival.

The State has limited possibilities of controlling the development in a certain direction. Parliament and Government can make frequency spectrum available and create a regulatory framework to encourage development. But even if digital radio is introduced on a wide front the question remains – will consumers want to invest in receivers to an extent that makes a switch-over possible? Or will a new system for distribution be existing for a long time side by side with analogue radio?

One reason to continue introducing DAB is that broadcasters want it and that digital radio, if it becomes a success, can promote pluralism in the media and lead to increased economic activities on the market. It is also a fact that DAB is being introduced in many other countries around the world. A problem, however, is that very

few broadcasters have strong financial reasons to broadcast digitally. There are no signs that any players would take the financial risk of subsidising receivers. And the prospect that pay-radio will be a success is small.

Some commentators believe that the development of digital radio instead must be driven by creating space for various value-added services that could generate new income. Some players see possibilities for business-to-business solutions or various forms of pay services in DAB.

Both SR and commercial radio have clarified that a development of digital radio will mean demands for increased resources or lower concession fees. It seems that the only possibility to make a switch-over feasible in the foreseeable future is to force consumers by deciding on a time limit for analogue broadcasts. There are about 25 million analogue radio receivers in Sweden. If we want to prevent radio listening from falling drastically after a possible switch-over, the audience must replace all these receivers in the long run. At this stage of the trials with DAB there is no foundation in fact to judge the political and economic prerequisites for an analogue switch-over.

DAB players around the world are now closely monitoring the developments in Germany and the United Kingdom. In these countries several commentators claim that 2002 will be the breakthrough for DAB. The outcome on these two markets will probably be decisive for the future of DAB. Several small countries have announced that they are reluctant to go ahead with further investments in digital radio until the larger markets in Europe have shown the way. There is reason for such a position also in Sweden.

For consumers digital radio must mean simple and cheap receivers. Digital broadcasts must also contain both today's programming and various types of new content and services that the audience might demand. The fact that neither commercial radio nor community radio has participated in the trials means that large parts of the radio business in Sweden have a lot left to learn about the technology and its consequences. A continued introduction of DAB must therefore naturally include also these players.

If Sweden decides to carry on with the introduction of DAB, a number of decisions will have to be made. In the closing chapter of my report I discuss the further need for analysis by the parliamentary committee that will be appointed after my work. It will be necessary to adapt existing legislation due to the specific character-

ristics of digital broadcasting. Among the questions to be addressed are frequency allocation, licensing, the relationship between the broadcaster, the multiplex operator and the network operator, distribution coverage, regulation of additional services etc.