Digital Radio in Sweden – Tallinn May 7th 2009

This presentation on digital radio in Sweden is based on the Swedish Radio & TV Authority's report "The future of radio". The aim is to focus on the questions

- do we want/need digital radio,
- if so how do we choose from different technologies.

The presentation also gives a short overview of the present development in Sweden. Doing this we must start with some short historical facts on digital radio in Sweden.

Timeline (pic 2)

The Swedish public service company Sveriges Radio has since spring 1995 a license to broadcast radio with DAB technology. A process to license private radio also started at that time but it was later suspended. In 1999 the coverage was 85 % of the population but when the Swedish parliament in 2001 decided on guidelines on public service radio and TV for the license period 2002 to 2005 the decision stipulated that Sveriges Radio should cut the costs in awaiting an evaluation of digital radio. As a consequence of the decision coverage was reduced to 35 % of the population and a committee was assigned with the task to make an overall analysis of the future conditions of digital radio. The committee finished its work in 2004 and the conclusion was that digitalisation should continue but that it was difficult to foresee which platform or platforms that should be used in a technology shift. The Swedish Radio & TV Authority was in 2006 commissioned by the government to follow the development of digital distribution of sound radio from a wide perspective. It is here important to note that the authority's task was not to judge or to take a standpoint of any single technology but only to gather information. The Authority presented the report "The future of radio" in June 2008.

The present situation in Sweden (pic 3).

The present DAB broadcasts in Sweden cover our three major city areas and one area in the northern part of Sweden. Still there is only public service broadcasting.

The commission (pic 4)

A commission to follow the development of digital distribution of sound radio from a wide perspective may seem unspecified but it was also stated that the authority in particular should report

- on the advantages and disadvantages of different technologies from the perspective of consumers,
- how different technologies fulfil demands on quality and security on broadcasts, as well as their potential to maintain requirements with respect to the broadcasting of important public announcements, and
- how different technologies can satisfy the needs of physically disabled or impaired people and for groups that belong to linguistic and ethnic minorities.

Before a possible shift of technology is considered one starting point may be the question if radio needs one particular main form of distribution or if it is sufficient with several supplementary digital technologies - do we need to choose. This is, in Sweden, a political decision. But we may

close in to that main question when going through the different possible technologies and when considering both what the consumer and industry want.

Consumers (pic 5)

If you take a look at the Swedish consumers' habits and wishes you see that about 74 % of the populations listen to radio for at least five minutes every day and that consumers want radio to be free of charge. A vast majority, 74 %, listen to FM Radio and 20 % listen to radio via Web/Internet. Portability is something the consumer wants in general and 79 % listen in the car. One example of this is that an FM receiver in the mobile phone is the most widely used function after telephone calls and messaging services. The Swedish consumer is interested in new functions but radio must be easy to use.

Radio industry (pic 6)

A majority of people and companies in the radio industry have agreed that radio needs to be developed. The FM network is short of capacity and therefore lacks potential. The industry in Sweden also thinks that radio needs one main form of distribution and that digitalisation is necessary in the very near future. To do this they want and need regulation so that they can get licenses and see the different conditions for their broadcasts.

More important aspects (pic 7)

The Authority's work can be seen as a puzzle where the pieces hopefully fit together without too much effort. Sometimes we might need to adjust the pieces to fit in and sometimes the pieces change as we work. We have several important aspects in this puzzle

A common standard

Sweden is a small country and a small market. That is why we think that the technologies considered for the distribution of media should be standardised by European standards organisations. The time factor is important since it is clearly indicated that a development must start more or less immediately.

Frequency space

Is scarce and I think we all have the demand to use it as efficient as possible. Since added value, in which I mean more content for the consumer, in our opinion is crucial we need a technology that allows more channels using the same or less frequency space.

Costs

Of course you always have the financial aspects. Different technologies come with different price tags, both for companies and consumers. The costs are also influenced by a number of different aspects.

Security & Preparedness

Radio and TV is an important piece of the society's warning system. If there is a need to reach the population in times of crisis or catastrophes broadcasts in radio is a very effective way of doing this. Digital technology here offers more options; one example is the possibility to have a

more advanced supplementary texting system. But some systems may be more useable than others. The present FM network is well functioning from this point of view with its robustness and with an almost complete population coverage. A digital platform cannot offer less.

Accessibility
For public service the programmes must be able to be received by the whole population on equal conditions. Support services are required if people with impairments are to be able to understand the broadcasts to the same extent as others. Digitalisation of radio here gives more possibilities.

Environmental aspects
The environmental aspects focus on the fact that only one third of the output power is required for digital broadcasting compared with equivalent analogue network. But the gains and losses depend on many things.
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If we listen to what the consumer and industry want we may, theoretically, answer the most important question – do we need a main distribution form for radio – with a yes. We may also draw the conclusion that we need digital radio to develop the media. Then you need to choose between different technologies. This is a complicated thing since you may always argue about how to value different aspects. The authority did like this, an evaluation matrix.

Evaluation Matrix (Pic 8-12)
In this evaluation matrix the Authority put what we think is the most important aspects. You have the wish for a common standard, the time for introduction, how many channels you estimate may be broadcasted in the different technologies, coverage and portability. We continue with the important issues of costs, warnings and accessibility. The other side show different techniques were we have sound radio based technologies etc.

From the different wishes we now can make an experiment. First we need something that is a European standard. This rule out three alternatives which may be interesting but we cannot wait for the standardisation process since...
...We want an introduction now or soon and two more alternatives are ruled out.

The added value for the consumer is important to encourage the process and we also need to use the frequency space efficiently. Alternatives that don't give us more channels and functions are ruled out.

Finally, in this thought experiment, we think that coverage and surface coverage is important which leaves us with two alternatives. And the radio industry and the network owner have explained that they prefer one.

A joint communication (Pic 13)
In the end of May 2008 The Swedish Radio & TV Authority received a joint communication from the major radio companies in Sweden, including public service. In this communication radio companies put forward a wish to develop radio as a medium. They thought this was the time

for the political decisions that would enable both public service and commercial radio to broadcast radio digitally. The programme companies intend to cooperate in issues of technology and distribution so that a common standard will be provided for listeners. The companies are also agreed on investing in a platform that will give both public service and commercial radio optimal conditions for development and that DAB+ is the technology that currently appears to be most appropriate for Sweden.

Without pointing directly at a technology the Authority, with the evaluation matrix, with the joint communication from radio broadcasters and with a recommendation from the network owner could make an indirect conclusion that DAB+ is to be preferred.

A committee (Pic 14)

The government assigned a new committee with the task to make proposals on the design of a new regulatory framework for commercial radio, both analogue and digital. This committee first stated that FM radio will not be closed down in a foreseeable future but that it was high time to make a legal framework for digital radio to make it possible to obtain a licence for digital commercial radio broadcasting. The conclusion that there now is a clear support for DAB+ was also made.

The proposal is that The Radio & TV Authority shall issue licence for all digital radio but public service. The licensing process is suggested to be similar to that for terrestrial TV. It means the government decides how much frequency space that can be used for digital radio and licence public service. The Authority then issue licences from different criteria. First an applicant must have the technical and financial means to broadcast radio. The applicant must also be prepared to cooperate with other licence holders on technical issues. When this first step is finished the Authority shall allocate the licences based on the how the different programme services may appeal to different tastes and interests and by programme companies' independent from one another. There is no fee suggested but we may charge an application fee. The licence period should be six years with no automatic right for prolonging.

The ministry is right now working with a government bill and hopefully we will know before the summer how the legislation will look like. The plan is that the legislation may enter into force January 1st 2010.

A DAB+ Pilot (Pic 15)

The present network owner, Teracom, is planning a one year pilot starting in June. Participants are programme companies – commercial and public service - , radio dealers and manufacturers.

Three major transmitters that technically reach 22 % of the population will be used but only a couple of hundred persons will be offered to participate in the tests. Teracom estimates that 15 programme services can be broadcasted in the one multiplex that will be used; it will be a mix of public service and commercial radio. Hopes are that after this Pilot, in May 2010, the activity will turn into regular broadcasts licensed by the Radio & TV Authority.