

The Radio of the Future

ARD to swiftly roll out DAB+ networks

The future of radio is also digital. While this is a supposed truism, the impression gained from the public discourse over the past weeks suggests that we struggle with this piece of wisdom when it comes to the digitalization of this last transmission channel of the audiovisual media. Television has done its homework – all of its transmission channels have been digitalized; the last analog holdouts will belong to the realm of broadcasting history in just a few years. 'Digital' is, of course, the natural environment for the telemedia. And it is only when it comes to radio broadcasting that experts are still debating – sometimes vehemently – about the right path. The radio community itself initially reacted hesitantly – but later with growing enthusiasm – to the new digital offerings. More than just a few, however, continue to believe that with analog FM reception we already have a solution that takes the future into account. Incidentally, when it was first launched, FM radio broadcasting was viewed with as much skepticism as critics view today's digitalization of the radio signal.

Hybrid Solutions

All the while, the advantages of digital radio are obvious: It puts an end to the notorious spectrum scarcity and enables the launching of significantly more wireless programs. It is technically robust, noiseless and guarantees excellent reception. Thanks to the display options, it can convey vastly more additional information than was possible using analog technology. Moreover, digital radio requires significantly less transmitting power and is more economical. But which digital radio is the right one? DAB+ via digital antenna? Or web radio which can be received across the globe? The answer is as clear-cut as it is disparate: It depends. Or you could answer: Both, depending on the location, time and expectations of the listeners.

Transmission using the digital terrestrial mode, in other words DAB+, is the ideal way to guide radio broadcasting into the digital future in a quantitatively and qualitatively regulated market. It is complemented by the possibilities offered by the Internet in a non-regulated market.

What is needed thus is hybrid solutions for the radio of the future. The advantages of this combination are especially striking when en route by car, which also happens to be one of the most common and intense radio listening situations: Depending on the signal strength, 'smart' car radios decide autonomously whether they broadcast the chosen channel via DAB+, over the Internet or – these days still – via FM. This makes driving safer because it obviates the need to search for a station, which is both cumbersome and forces the driver to momentarily take his/her eyes off the road.

Digital Radio

epd. The debate on DAB+ digital radio has flared up again since KEF, an independent commission that determines the financial requirements of broadcasters, prompted media policy decision makers to make a "clear political commitment" to switch over to digital technology. KEF estimates the ARD and *Deutschlandradio's* total costs for the switch-over at 584 million euro. Based on estimates by the private station "Radio NRW", expenses of another 500 million euro will have to be shouldered by the private radio broadcasters (epd 16,17/16). While private broadcasters are interested in keeping FM as their means of transmission for as long as possible (epd 36/15), the ARD and *Deutschlandradio* are banking on the rollout of DAB+. Ulrich Liebenow, MDR's director of operations and chairman of the ARD's Digital Radio Work Group, stresses the necessity of a clear timetable for the changeover.

So why the dispute in which advocates and opponents of the various technologies are battling it out so publicly and vehemently? In any case, this has nothing to do with the DAB system's technical performance. The technology is proven. But the new technology is competition changing and this is why opinions diverge on whether the rollout of DAB+ is a good idea or not.

A sticking point is that the technical possibilities of FM have been exhausted; the frequencies have been allocated and over the long term there is no room for new channels or additional services. This is good for the

current top dogs but bad for successful, young radio entrepreneurs who are eager to expand. And it's also bad for consumers who stand to miss out on the greatest possible radio program diversity.

In economic terms, private radio broadcasting has thus far exclusively lived from the terrestrial, analog broadcasting of their programs. All other modes of transmission are supplemental at best and cannot readily replace the business model (one broadcaster, many users) premised on FM. For this reason, we need to find a way that opens the door to a digital future for private broadcasters as well. And actually this is in the commercial providers' own interest. Indeed, for years now they have invoked the historically-based imbalance in favor of public service providers who have better frequencies and frequency chains. This has made access to the market more difficult for innovative newcomers.

And what about public service radio broadcasting? Just like television, it has a mandate from society to deliver information, culture, education and entertainment programs. In a media society that is becoming ever more differentiated, fulfilling this mandate solely with standard programming is becoming more and more difficult. What's missing is niche radio content that caters to listeners' special interests. This radio content can have thematic focuses such as architecture, philosophy or political background but it can also take the form of information and education channels. The focus could, for example, be on jazz, blues, folk music, German *Schlager*, metal, easy-listening, classical music or electronic avant-garde music. In the same way that the digitalization of television has made a sheer incredible number of special interest channels possible, the digitalization of radio can also serve any number of listener interests.

Critics may argue that all this is already available on the Internet. That's true, but there are major differences in terms of technology, content and regulatory issues between broadcast and the Internet platform (broadband). As a wireless technology, the Internet has a difficult time delivering sufficient network coverage already today. Presently, it is not prepared for radio streaming as a mass communication tool.

Comprehensive signal coverage

The streaming costs that ensue for end-users should not be underestimated (just have a look your own mobile contract). The costs for DAB+, on the other hand, add up to a mere five cents per household for ARD's entire program offering – and this is already covered as part of the license fee. Perhaps mobile communication and broadcasting applications will eventually merge as one within a network. The necessary frequencies for this, however, won't be available until after 2030. In all seriousness, no one could possibly want to sit out the digitalization of radio broadcasting that long – unless of course there are massive financial interests behind this. It is becoming obvious that full reception for web radio is not feasible for the time being. When it comes to emergency radio broadcasts – especially for cars – this is a situation that neither society nor policy makers want to put up with. DAB+, on the other hand, has its own infrastructure and provides full coverage that is not susceptible to system overload. Moreover, it would noticeably unburden the mobile networks.

Another important argument for digital radio is of a broadcasting-political nature. In contrast to the Internet / mobile radio, the DAB+ networks can be established, designed and run by the broadcasting corporations themselves and made available with full coverage. Over the past two years, public broadcasters have been able to make great headway here.

Development status in Europe

Communication in a mobile society – just like other key technologies – has long since become a global market. And thus, the digitalization of radio is not something that only regional broadcasters, local politicians and national economic associations are dealing with. Finding the silver bullet to digital radio is not an issue just within Europe – it's a global issue. A glance at the level of development of our European neighbors is worthwhile:

- Norway will switch completely to DAB in 2017
- Switzerland has published plans for a switch-over to digital between 2020 and 2024

- Great Britain has launched an ulterior program to further roll out national and local DAB networks
- in Denmark, a systematic roadmap for digital radio has been worked out which envisions a complete switch-over as soon as half of Denmark's radio use is digital
- in The Netherlands a program with regional services was implemented last year after a national service was already launched in 2013
- in Italy, digital radio coverage was expanded to Northern Italy, Southern Italy, Sardinia and Sicily; supplemental local digital radio offerings were expanded and now already reach 43 percent of the population
- in France, DAB services were launched in Paris, Nice and Marseille in 2014. In December 2015, the French regulator CSA published its time plan for the advancing of digital radio throughout France with diverse content in over 30 cities

This compilation could be extended to include even more European countries that have struck out on the path to a digital radio future.

For retail trade purposes, the development of digital radio in Germany plays a key role in Europe. Obviously our European neighbors are taking note of the fact that DAB+ is picking up speed among German consumers. Other European countries are counting on this to have a signal effect for the expansion of DAB+ in their own markets.

Smartphone with DAB+ reception

Several weeks ago, public service broadcasters and private European radio broadcasters founded the "European Digital Radio Alliance" in Paris to promote the expansion of digital terrestrial radio Europe-wide. A key objective of the Alliance is to embolden the industrial devices industry to create the prerequisites for DAB+ reception by manufacturing receivers that are both FM and DAB+ capable. In this context, it is interesting to note that LG has just introduced a smartphone with DAB+ reception to the European market thus making it the first internationally-relevant smartphone manufacturer to do so.

In the meantime, the political establishment has embraced this topic on a national and international level alike. Günther H. Oettinger, EU Commissioner for Digital Economy and Society, and Dorothee Bär, Parliamentary State Secretary with the Federal Ministry for Traffic and Digital Infrastructure, are giving particular attention to how the fitting of new vehicles with DAB+ radios as standard is progressing.

In mid-May, ministries, automobile manufacturers and the radio industry gathered in Brussels in an effort to boost the fitting of digital receivers in automobiles (epd 21/16). Jointly with the French media regulatory authority and representatives from broadcasting and the automobile industry, government representatives from Germany, Great Britain and The Netherlands outlined their European vision for digital radio. In their view, DAB+ is to become the first choice for consumers on the entire European market.

Digital radio is not just a national matter and only if Europe acts in concert will it become worthwhile for the industry (automobile manufacturers and device manufacturers) to invest in this new technology. Currently, we have a mixed picture on the automobile market when it comes to fitting cars with digital radios: While 70% of new vehicles in Great Britain are fitted with DAB+ receivers as a standard (in Switzerland this figure is 60%), other countries are greatly lagging behind. It is vexing that many manufacturers continue to demand extra payment for enabling DAB+ in cars. Brits are also at the vanguard when it comes to the standard of installed devices: On the British Isles, UK Radioplayer has introduced an auto-adaptor that can switch between FM, DAB and IP as necessary.

Discussing more than just the FM close-out date

Advocates who are banking on DAB+ for the future of radio across Europe are also united by another insight. They agree that having a publically communicated timetable – that is agreed by the involved players – is a

winning formula in combination with attractive new program content. In those countries where a clear roadmap is in place, the market for DAB+ is growing faster than elsewhere. With this in mind, the ARD – in close

collaboration with the political establishment, the auto industry, regulatory institutions and private broadcasters – is ready to push for a quick rollout of digital radio services in Germany.

We take the view that the discussion about DAB+ should not be reduced to a close-out date for FM. It's helps to view the digitalization of radio as a process at whose end a sufficient number of users can be reached via DAB+ or the Internet, thereby making it possible to end parallel FM signal transmission.

The ARD – under the aegis of MDR and in dialogue with other market participants – has developed a two-step model for the introduction of DAB+. This model consists of an expansion phase and a migration phase. To goal is to keep the FM/DAB+ simulcast phase as economical as possible – and as long as necessary – while also considering the interests of listeners. As part of the expansion phase, the acceptance of DAB+ is to be significantly increased while also putting in place the prerequisites for a concrete procedure – agreed on by all – to close out FM. This also entails agreeing on and publishing a binding close-out date.

Our model encompasses concrete measures for the expansion phase which will to go hand in hand with the rollout of DAB+. As a prerequisite for a transition from the expansion to the migration phase, we propose the reaching of a threshold level of 95 percent coverage for public service programming in Germany. The ARD is eager to expand their networks quickly and to reach the designated coverage goal between 2018 and 2020 jointly with *Deutschlandradio*.

The reaction of the market to ARD's phase model is encouraging: Policy makers, private broadcasters and the industrial devices industry have signaled that this model has good prospects for a wide consensus among all market participants and they are mulling further considerations. Which specific prerequisites must be met in order to enter the subsequent migration phase is something that is still under discussion. The ARD has proposed using terminal device sales – a measurable parameter. We are, however, also open to other ideas.

New content and offerings

Contrary to what would please some of the critics, consumers are reacting positively to the fresh wind in the market. The Nuremberg-based consumer research body *Gesellschaft für Konsumforschung* (GfK) recently designated digital radio as one of the driver's of growth in the German audio market. Consumer researchers have established that since the start of DAB+ in 2011, Germany's digital radio market has managed to grow steadily. In 2015, a total of 952.000 digital capable receivers were sold. This corresponds to an increase of 32 percent compared to the previous year. Thus, 13 percent of all radios sold in Germany last year were equipped with a digital radio chip. This year too shows a strong upward trend.

It may, however, fall short if you consider only the technical side and the double digit growth rates for digital radio sales. Let's switch to the user-sided viewpoint: Obviously, it's necessary to persuade radio listeners of the new radio standard by introducing new special interest content. And here we can observe that – unlike with other technical innovations (in television, for example), it isn't only young people who are driving the new technologies. Indeed, German *Schlager* music, folk music and even brass band music is what triggered the huge demand for DAB+ receivers in *Bayerischer Rundfunk's* broadcasting area. In fact, at times retailers were unable to keep up with the demand. It is thus not surprising that other providers, including *Norddeutscher Rundfunk* and *Mitteldeutsche Rundfunk*, are following Bavaria's lead and adding special interest programming this year for German *Schlager* enthusiasts.

Pilot study on the use of DAB

But private broadcasters are also active: At the moment, they are discussing a second national multiplex. Presently we are in an expansion phase and that's why the discussion about the high costs for simulcast, which results from the desire to broadcast all radio programs nationally, regionally and locally in simulcast over many years, are surprising. But this isn't even necessary. It goes without saying that every radio that is sold will still have an FM reception component for many years to come. Why should operators who don't acknowledge the

program based added value of digital radio broadcast in both systems at the same time? What's important is finding a place in the digital world once analog transmission is switched off.

What is still missing now is a study on the actual use of digital radio – beyond what its technical reach is and what the sales numbers look like. Up to now, there has been no German study that provides reliable information

on the use of DAB+. Several partners, including state media institutions, private radio broadcasters, *Deutschlandradio*, technical suppliers and the ARD, have gotten together to discuss what such a DAB+ usage study should entail so that this gap in knowledge can be filled. After the 2016 pilot study has been completed a follow-up study could be conducted the following year.

The path to a full rollout of the DAB+ digital radio standard has been outlined. The fact that this road still needs to be cleared of many obstacles before we can speak of a final changeover from FM to digital radio is obvious. Provided that all the market participants agree – and the political will is in place – the chance of a digital future for radio has never been as great as it is today.