

Conference "DIY Databasing! Technical and legal aspects of Free Access to Information in so-called Information Society"

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Panel A: Radical Innovation. The future of digital broadcasting and Community Media

04. September 2005, Ars Electronica Center, Linz, Austria

Participants:

Pieter de Wit, OLON (Organisation for local Broadcasters in the Netherlands) (NL) - PdW

Peter Reindl, RTR (Austrian Regulatory Authority for Telecommunications and Broadcasting) (A) - PR

Christoph Lindenmaier (CH) - CL

Leo Saftic, matrix e.V. (A) - LS

Host: Veronika Leiner, Radio FRO (A) - VL

<http://www.fro.at/ars05/participants.html>

VL: Digitalisation and media convergence are offering great benefits not only but certainly as well for community media and free media as Radio FRO is one. Organisations like ours are fostering free speech, free access to information, active participation in media, self representation. One of the main benefits of digital technologies is the possibility to do all of this more interactively. Tools like online databases and the online hype of the last months "podcasting" add an extra value to the work of producers of radio shows not only in free radio. But, which is special for free radio as it serves a variety of communities and different interest groups, it is usually not a programme you simply listen to during the whole day but you will choose which programme you want to listen to. Podcasting in combination with databases like the one the Austrian Free Radios is running, the Cultural Broadcasting

Archive, simplify this and podcasting makes a radio show usable by everybody at any time in a very simple way. That way listeners get a much more active role in choosing their programmes, and by downloading them they also help assessing the shows and they are able to get into direct contact with the producers themselves.

At the same time terrestrial digital radio has now begun to establish itself in the US and Digital Audio Broadcasting, an EU financed standard, which was already pronounced dead, has recently been celebrating its resurrection. This provides improved reception quality, makes possible supplemental services like audio on demand ("podcasting"), independent of cable hookups. More reception is available over much wider areas and mobile reception is enhanced by broad band, UMTS and Wireless LAN.

So, for free media this is actually a quite beneficial development. At the same time the actual technological standard that will be chosen is existential for community radios. After all, we must proceed from the assumption that digitalisation ought to contribute to greater diversity of opinion and of pluralism of media and that technical inadequacies cannot be permitted to determine the media landscape. Just recently, in May 2005, the European Commission demanded from their member states to accelerate the shift from analogue to digital TV and radio until 2010 or 2012. And these are the reasons, though not the only ones, why in the next 1 – 2 hours, we are going to discuss these issues on this panel.

The digitalisation of the analogue transmission of radio and TV is one of the challenges broadcasters are facing in the next years. Although it doesn't seem that in Europe there is already a prevailing technological standard DAB is quite likely to prevail. It has been developed in the last 10-15 years. And during this time it has been pacing in and out of the discussion quite frequently and although it has already been pronounced dead it is currently being resurrected. So my first question goes to Peter Reindl. I would like you to briefly introduce yourself. What is your background?

PR: My name is Peter Reindl and I am working for the regulatory authority in Austria, the RTR, and we are in principle the managing office of the Communication Authority Austria, KommAustria. And I am head of the department Frequency Management for Broadcasting. This means we provide a technical basis for frequency planning, so mostly we are concerned with radio broadcasting via antennas. And we are working also in the international field, because broadcasting frequencies have to be coordinated always with the neighbouring countries. Next year there will be a large conference in Geneva. During this conference the frequencies in band 3, 4 and 5 will be rearranged which means planning for TDVB but also for TDAB.

VL: Could you briefly describe how the DAB standard works and which benefits it brings to the broadcasters and the users?

PR: All analogue radio services will go to digital. TDAB, the standard was developed to overcome a lot of problems which we have with analogue radio. Analogue radio means that the frequency band is overcrowded. You have always problems with receptions, especially in mountainous regions, in Austria, you have reflections, and the quality of the broadcast suffers under these reflections. Therefore a new standard was developed which is more frequency efficient because it can use the SFN mode, single frequency mode. Of course, you can provide more services, better programme services digitally, you can use interactivity with return channels and maybe in future there will be a combination of broadcasting and mobile radio. A lot of possibilities for the future will be provided by DAB.

VL: Thank you for the brief explanation. The parallel technology to DAB for TV is DVB, digital video broadcasting. I would like Leo Saftic to do his presentation. He is member of the very recent cultural association matrix which is currently developing a digital TV project here in Linz which originally was developed within the frame of the Stadtwerkstatt and is still supported by the STWST. Leo Saftic is going to do a presentation on the project "Collective Dynamics".

VL: I would like to come back to Peter Reindl at this stage. Would you explain what is planned especially in Austria regarding terrestrial DVB and on the DAB sector.

PR: Basically, there is this DVB standard which consists of three standards. And these are DVB-T (terrestrial), DVB-S (satellite) and DVB-C (cable). And of course in Austria the authorities and also the regulatory authority is interested that all these distribution ways are digital in future. DVB-S we all know quite well, it is a very rapid development. Because of some conditions maybe in a few years the analogue satellite will be switched off. This is more or less outside of Austria, you know the company ASTRA from Luxembourg, which goes to digital very fast, but also broadcasters want to go on the digital satellite. What we can do in Austria is to facilitate the developments in DVB-T and in cable TV. Especially this is one reason why this project in Linz was started, one year ago we had test transmissions and a similar project in Graz which was for DVB-T, but this project in Linz is especially for DVB-C. In general I have to add that in Austria a digitisation fund was founded which is filled with about 7 million Euros per year. And this money should be used for the switch over from analogue to digital. But not only the switch over for antenna but also for cable TV. So this is technologically neutral. Of course the situation in cable, when I compare cable and antenna distribution, there are difficult situations. Because in cable, we have companies which own these cables and they provide the programmes in a cable with broad bandwidth. If one company decides to go to digital, it doesn't influence the others and neither the current analogue TV.

But for TV via antenna it is very complicated because we use frequencies on the air. And this means that one frequency perhaps transmitted in Linz can disturb frequencies which are operated in Germany or Czech Republic. Additionally, this frequency band, which is still used for analogue TV, is really overcrowded. So it is very difficult to switch over, you must imagine you need some simulcast phase. Some

time, when you have analogue and digital together, and after some time you can switch over operating analogue channels to digitals. The situation in Austria is that we made a public tendering for DVB-T operators. The date for applications was the first of September. Now the telecommunication authority has to prepare the licence for the future operators of DVB-T. For DAB the laws that are needed to introduce TDAB or other digital radio services still have to be prepared, but I think this will be done next year and there will be comprehensive discussions how to introduce digital radio in Austria.

VL: Pieter de Wit is director of OLON, the Dutch federation of community broadcasters. Could you outline the current situation in the Netherlands. OLON has been researching the digitalisation of broadcasting in the last years.

PdW: OLON is representing about 300 local community radio and television stations in the Netherlands and we have been involved in the debate around the digitalisation of audio and television from the end of 80ies. One of our concerns with digital radio is that the DAB system which is most widespread and developed in Europe and supported by the national public broadcasters via the European Broadcasting Union doesn't fit for local coverage. OLON invested a lot of effort to find ways to adapt the DAB system to also meet the needs for local radios. In a way we succeeded to get the dutch government to get 117 different allocations in the Netherlands in the band for digital audio. So 300 local radios, 117 allotments, each allotment has space for about 5-8 radio stations, depending on the quality you have. So, there is now at least in the DAB technology room for enough local radios. But still there are a lot of problems with DAB standard. For example the problem that you are going to be dependent on the multiplex operator. This is comparable to the cable situation where you have to bring your audio signal to a central point, a multiplex operator, cable operator. And then this multiplex operator should carry your signal to the transmitters and then people can perceive your local radio. In the analogue frequency situation we have a right on frequencies on the FM, in the DAB there is not such a right defined yet.

We are dependent on the goodwill of the multiplex operators and that is not a good situation compared to the analogue situation. The same is with cable radio. And in the digital world, we want to have an equivalent in this kind of must carry rules. Otherwise we have to go into competition with commercial broadcasters, with dataservices, etc. And since we operate on a very small scale - and everybody who is working at community level with radio and television knows - it is impossible to go into competition with these other services financially. We can go into competition with the quality of services we offer but this quality has to be translated into legislation that provides access into this new digital media. Also, since this DAB technique is complicated not only in the technical sense but also organisational, we were also looking at alternative systems in our study "Eureka" which we performed three years ago with assistance of money from the Dutch government. Especially we were looking at the development of DRM (Digital Radio Mundial). DRM is developed by the owners of short- and mediumwave transmitters, it was meant to get better quality on short and medium waves. And there was a sort of agreement between the DAB and DRM consortiums to keep out of each others territory. But for us, we thought, DRM on FM could be a solution.

So we talked a lot with other companies and organisations. And I think now, since half a year the DRM consortium has officially announced to research the possibilities of DRM on FM. The advantage could be that it is based more or less on the same frequency allocation technology as traditional FM. There is the possibility that next to your analogue you can use the same frequency and simultaneously transmit the digital signal. So there is a better transition period possible than in DAB in where you have to switch off the transmission of both analogue and digital on different frequencies. And if there are enough receivers with digital receiving possibilities for DRM than you can switch off the analogue and use the bandwidth for other digital radio signals at the same frequencies. The advantage is that you are still capable of owning your own transmission side, your own FM frequency. OLON has decided to support DRM on FM. And I hope that we will become member of the DRM consortium to actively be involved into the further development and watch that DRM doesn't go

into the same direction as DAB which is good for the large broadcasters but not good for the small scale broadcasters.

VL: Christoph Lindmaier, you have been active in community radios for the last 20 years and you are very much concerned with frequency planning and the improvement of frequencies as well. You have been a critical of DAB from the beginning. Could you explain us how the situation in Switzerland is on the digitalisation of radio and the other question: There are different benefits digitalisation of broadcasting is bringing, but will there be any possibility to cover difficult landscapes (like mountain regions) better or is there no difference?

CL: I am freelance consultant for community radios. I was also invited to participate in government led study groups and research projects especially on this issue. But let me stress something first to spoil a little bit this enthusiasm on digitalisation. When we speak on behalf of local community radio: we have a lot of benefits on the contribution side, like having contact to people, rebroadcasting programmes from overseas, getting into contact with correspondents, this is marvelous. But we really have seen only harrassment on the distribution side when it comes to digitalisation. And you must bear that in mind. We are really threatened to disappear, this kind of local radio stations, if digitalisation is continued in the same way as done in the last two decades. It is a menace, I also can calm down, because it came in several waves, the threat that they gonna blow us away from the frequency band and this was done in the mid 90ies, there was initiatives, that with DAB they will clear the FM band where we all are within 5 years and everyone has to find a multiplex and broadcast this way. Well, that is the way they spoke and we had to get on our feet and say "NO". And we attacked them from all sides and had quite a success. Of course other commercial radios didn't like the idea as well, for other reasons. But you must bear in mind, that not as with television, with radio it can still last a very long time that we have FM band as the work horse. The place where real radio takes place is on the FM band, and on a Swiss expert study group we said that it will not be before 2015 that there can be a possible shift to any way of digital transmission of radio signals as the

workhorse.

If the government says that now we will really go forward with digitalisation, we are afraid that we will get lost somewhere in the landscape. So we have to struggle for intelligent solutions. Personally, as a technician, I state that DAB is the best solution for mountainous areas. Purely technically speaking and also for national and regional wide coverage this is a very intelligent thing and is not outperformed by more recent technology. Of course you can do other coding schemes, not use MPEG2 but MPEG4 algorithms but that is only a detail. I think that this multiplexing for these programmes is an intelligent thing. But if they cannot come with a solution, be it financial or otherwise, for this small scale broadcasting then of course we will go exactly the same direction as our Dutch friend. We will participate in any initiative that brings any advantages of digitalisation on the transmission side to small local radio stations even though technically they may not be perfect.

Switzerland participated a lot in the DAB technology for such a small country. I heard Austria did not. They had several pilot projects broadcasting in the VHL-band, in the L-band, and I can tell for the L-band in Switzerland that it is almost not existing anymore as a proposal. I mean, they can not hinder you if you want to do something on the L-band. But they found out that the planning parameters were not really down to solid ground. They had real problems. And if you look on the receiver generation already for band 3, they do not fulfill these planning requirements. They were telling that you would have perfect indoor/outdoor mobile reception which of course in fact is not the case. All this stuff about all this DAB resurrection comes from England or Denmark where they say, okay now, we have a success, we have receivers that are sold now in GB, stating that more of half of the receivers sold are DAB, which has not happened in any other country and is the main obstacle for mass penetration of this technology. Everything was promised from DAB, the reality is not as perfect. It can improve, in Switzerland people are complaining about indoor reception as well. I say as the governments have decided to fulfill the planning work anyway, there will be some space available for these DAB frequencies. Whether in the final outcome, this

capacity will be used for old time broadcasting or for data casting, is completely open.

Now, many alternative solutions are appearing that if it doesn't work with radio maybe we can put datacasting and have another chip in your mobile phone and receive data screens. So, it is open. These bands will be reserved for radio and if anybody is willing to use it he will have the occasion and I think podcasters will occupy this space but for the rest everything is open. And we small radios will only observe, and if we see that anything develops to become a mass phenomenon we will try not to miss the train. That is the only strategy possible.

VL: I would like to sum up the difference between DRM and DAB standards: The DAB standard requires to get into business contact with a multiplex company, which means a considerable cost for the radio station itself and it is going to use a different frequency band. With DRM most likely we could be using the current FM band used for analogue radio. At the same time broadcasters would be able to use their own equipment. Only little technological adjustments would only be necessary. So there are two kinds of competing technologies. What is interesting is how governments are reacting to this situation. There are not only community radios but also commercial radios which can be received in local areas. Such commercial radios are usually putting pressure on governments through their lobbying activities. What is the current situation?

PdW: In Holland the commercial radios two years ago paid a lot of money for FM frequencies, so they are not very happy with the fast development of digital radio. That means new investments, they say they all lose money and are angry at the government which is pushing this new technology. So the commercial radio sector is not very cooperative in the transition to digital radio. On the other hand they look at the US and the In-Band-On-Channel system which is developed to accommodate the existing commercial radio sector and has the same characteristics as DRM on FM. So the commercial radio sector is not very progressive in this way. The government wants to tender the DAB frequencies in the VHS- and L-band in the next months.

There are still some political debates how to tender it. We want to get in the standard to set rules of access for non commercial local radio. There should be some guarantee that we have access to this multiplex. We don't want to be dependent on the goodwill of commercial multiplex operators. There is not much interest for this multiplex and there is a big struggle going on between two streamings of aspirant multiplex owners. On the one hand is the combination of the commercial radio stations which are only interested in stopping it. On the other hand we have an independent company which says we make it a success, the contact to the data services, we have money to invest and give access free to local public radios, so you only have to bring the signal to the multiplex and we will take care of it.

So, we are waiting, participating in the political debates, in all kind of advisory groups to get our positions guaranteed in this digital development and we are also pushing for support by the government for alternative digital systems like DRM. We were happy to see that in the last governmental paper DAB it is not called for anymore but digital radio. So the one-standard-thinking has changed into a multi standard thinking and the Dutch government is now considering DRM on FM as a valid development if the DRM Consortium is capable of getting this standard technically developed further and to get it better than DAB, for example on the indoor reception side.

VL: Could you tell us something about legal recognition of community media in the Netherlands because this is something that varies considerably between the European countries.

PdW: One thing that is written always on the policy papers is that analogue can only be phased out if all players operating in the field including local community media are going to be served by the digital means of transition. That means that this is a guarantee that we have to get a solution for the local radio/TV situation. So, in the Netherlands there is a high degree of recognition for the community media sector in legislation and policy papers.

VL: I want to come back to the Austrian situation. What is the current policy of the Austrian legislative authority concerning digitalisation of audio broadcasting and the technologies involved?

PR: The situation is really different to Switzerland and the Netherlands because we are behind these countries in introducing digital radio. As I explained before there is not yet a strategy for digital radio in Austria. In the past we prepared the strategy for DVB-T and we are just in the process of granting a licence for a DVB-T multiplexer. In Austria we have the Digital Platform which was founded in 2001. And this is a platform where all interested parties in broadcasting are invited, there are more than 300 participants, within this framework we have to prepare the digitalisation of audio. Now the communication authority and the RTR are preparing the digitalisation report for the parliament, which will be submitted by the end of the year. In this report we will stress the importance of a way forward for digital audio. The legal basis, meaning new laws and changing of existing laws has to be prepared by the government next year. As the RTR and Comm Authority are responsible for the digitalisation we have to prepare a strategy. But we will not do this behind closed doors, in contrary all are invited, the platform is the Digital Platform Austria. So there is still the possibility to work together and to give, or to respond, develop ideas how it could be done in Austria, to go from analogue to digital.

Next year there will be the big conference which is not only dealing with DVB-T but also DAB. From technical point it is very interesting and positive that additional frequency resources will be made available for T-DAB. This was one of the main problems, that not enough spectrum is available in band 3. This will be changed in the future but I think, we will start now perhaps the real discussions in band 3, but it will be really a long way. Of course, DRM is really important, which we have to take into account. For the moment it is only standardized for frequencies below 30 Mhz which means middle- and shortwaves. The next step is to prepare the legal basis for DRM for middlewave, maybe this is also interesting for local communities, for shortwave, because of the frequency band and the propagation is not so interesting for local

communities. In future – but this standard is not yet ready – this extended DRM standard for the FM band. But there are still additional aspects, like the receiver problem. As I said, in Austria the process starts to prepare to go to digital for audio. All interested parties and stakeholders are invited to work together and find the best solution for Austria.

VL: Earlier you were talking about tests that were done with DAB.

PR: There have been test transmissions for many years in Vienna and Innsbruck, carried out by the ORF, but here only the signal is on the air, there is nothing special tested, so probably there are no receivers tuned to it or only a few. There is no promotion, these are only test transmissions, meaning that they are limited for one year and afterwards the ORF can apply for an additional year. So these are no regular transmissions, no special tests, only the pure signal is on air.

PdW: Is the community media sector involved in the digital platform?

Audience (Helmut Peissl): I can confirm that there are 2-3 persons from the Association of Free Radios involved in the Digital Platform but as the main topic so far was digital television there was no topic being really relevant for us. But we have a rather frustrating history also with this digitalisation fund, because we wanted to start a digitalisation project on radio but it was not adopted by the RTR authorities. But as soon as the discussion on radio starts we will get involved.

Audience: The European Commission issued this statement on accelerating the shift from analogue to digital in May 2005, and if we get new frequencies for free for contentcast this means more jobs. So, they want to push forward this development of phasing out analogue frequencies. What do you think, Mr. Reindl, will FM be switched off? We heard 2015 to 2020 would be a realistic frame, but ...

PR: I know this paper where this date of 2010 or 2012 was mentioned for

broadcasting. But I have also read a different paper by the European Commission. In this paper a little bit more is mentioned about digital radio. In this paper it is said that the current situation in the countries is that only Germany is thinking about a date of switching over from analogue to digital radio and this date may be 2015. So probably the Commission wasn't so much aware of the difference between radio and TV. I took part in working groups of the EC. In these groups there were only discussions about DVB-T. So , I was a bit astonished when I read that also digital radio should be switched over in 2010 or 2015. I think this will be discussed additionally in the future. I believe that for radio it will be later, but that is a personal view.

PdW: I agree that this EC paper was mainly regarding DVB. The same in Holland, the discussion is only about outphasing analogue TV to digital. Anyway, in Holland it is easy because 97% of the households have cable and only 3 % are left to be switched off from the analogue to the digital ether. So this switch off process of TV is much easier than with radio, and I think it is the same situation in many other European countries.

PR: Concerning taking into account local community radios: I don't want to go into too much detail, but the differences between L-band and band 3 for TDAB were mentioned, and in fact it is clear that TDAB in band 3 is very suitable for large coverage areas, we are talking about allotments, these are areas where you can use one multiplex, which means 6-7 programmes depending on the quality. For example we planned in band 3 having for every federal state in Austria one such allotment. In fact it turned out that for small areas it is difficult to find a frequency in this range, in band 3. So we had to accept that for Burgenland and Vienna we did not get a band in band 3, but we got one in L-Band. Then there was the Maastricht conference in 2002 where a second coverage was planned, and this was planned in L-band. We in Austria we submitted the same regions, the federal states, as one allotment per block. In Maastricht, there was an additional planning conference. It lasted one week, where we planned an additional coverage for all the countries in Europe.

That time Austria submitted smaller areas, smaller than the federal states. In Geneva, next year, we will plan additionally for band 3. This band 3 is from channel 5 to channel 12 and it is a very difficult band and the objectives of the countries are very different, which makes planning quite difficult. But maybe Austria is lucky, that all neighbouring countries have the same approach, and this might be the best way for Austria, planning additional 2 coverages for TDAB and one coverage for DVB-T. This will be done the same way in Germany and Switzerland, although the Swiss colleagues think about not using DVB-T in band 3 but only TDAB, then they can use the allotments which they plan for DVB-T for digital radio, TDAB. As there is a difference between the bandwidths of the two, you have the possibility to transmit in one TV channel in band 3 several blocks TDAB. If this DVB-T channel is used for TDAB there are a lot of possibilities for TDAB. Of course, the question is if TDAB is really best suited for local coverage. It was explained before that you have at least six programmes in stereo and additional data capacity in one TDAB block. If you plan for very small regions in band 3 – from the frequency point of view - it is a waste of frequencies. What is if you can not fill these multiplexes, then additionally it is a waste of frequencies. There are a lot of open questions.

But for the moment, it is planned in Austria, two additional coverages for the whole area of Austria without regional multiplexes which means that the allotment areas are even larger than those planned in Wiesbaden. But there is one aspect: you need one network to be able to carry at least six stereo programmes or more, with two you can really transmit a lot of programmes. Austria is a small country and we don't have as many programmes as in Germany. Maybe it would be one possibility that also local community radios are taken into these multiplexes. In any case, the public programmes but also those of the commercials have to be put into the multiplexes. That means they will all change their coverage areas. For the public broadcaster it doesn't matter but for the local operators, if they go to digital the coverage area will be changed. This has to be taken into account when discussing the details of digitalisation.

One other point is very important: the EC in the past always said that the switch over must be market driven. I think in the meantime it is clear that this will not work. I think it can only work if there is a straightforward political involvement or policy. All the involved parties have to come to some decision together. Only if they can agree on a common strategy it is possible to find a good solution. Also perhaps to accelerate the transition period. In Germany there was the idea to make it market driven, they started in 1994. In Austria, in the past the public and commercial and non commercial broadcasting stations didn't have a strong interest in going into digital broadcasting. Of course, there is an additional aspect, that perhaps there is an improvement of DAB, called DMB, where it is not only possible to transmit audio data but video too. And we have to take into account on DVB-T and DVB-H, you can also transmit data, radio, .. whatever. The situation is complicated and new and therefore it is important that all stakeholders know about the possibilities of going to digital and then hopefully find a good strategy.

Audience: You are all talking about channels, as if channels are the only thing today. I think what is happening now with podcasting etc. makes clear that it doesn't really matter anymore whether you have channels because things will be stored in receivers, in homes, in pockets of the user and wherever these signals come from doesn't really matter anymore. You subscribe to podcast or broadcast in the future, you will be able to link audio, video programmes exactly the way you do it on the internet. So should broadcasting be worse than the internet when it comes to searching and that stuff. So I think you are missing one very important point here, the local store-its. You will store things in the home, you will store things in the net, at local senders and so on. I really feel that the whole discussion maybe on a wrong track, I think virtual channels is what is really going to happen.

CL: I fully understand your perspective but I have doubts that this is what will be happening. This is the perception of the well trained middle class and if you have all these immigrant communities, for example, they will not install their super sophisticated networks in their homes and, unless some very clever entrepreneur will

provide a very easy solution which fits their needs. This will not be so generalised and I think the old fashioned way of radio still has got some time to survive. We cannot back on that future perspective if we have to defend the existing projects, we have to study the other ways of distribution well. We have to link them together but we cannot rely. We must continue in that struggle to have our channels.

PdW: Maybe I can add to that, that even the commercial broadcasters are bedding on traditional media as a base for new media technology. For example Jon de Mol, the inventor of the illustrious Dutch format of the in home programme, Big Brother, he has invested millions of Euros in traditional TV and radio to build up a digital community. He says that at least for the next 10 to 15 years he needs this base in traditional broadcasting. And if you see about the successes in the internet in podcasting and radio the most successful website in the Netherlands is the site of the national public broadcaster. But this website can't be a success without the broadcasting. So, the base is a simple and easy broadcasting via TV or radio. Then you can build up new technologies, but these don't replace the traditional broadcasting. I think these are things which will be added to the broadcasting. The most successful users of these new technologies will be the traditional broadcasters.

Audience: What we see right now is that a lot of individuals start podcasting. And, for example the Danish national broadcaster and the BBC are doing podcasts. Why don't you? I think you are one step behind right now and may be changing. Another thing I want to bring in is that this is not only for the first frontrunners. Actually we see now that PDR DVD recorders are now in more than 10 % of the households in the US and Japan and they are coming here very quickly as well. I really think that this is the biggest chance you have had for making local stuff really work because you will be able to send it not only to the local community but to all the local people living abroad.

VL: Maybe you weren't here at the beginning of the conference because we were already talking about podcasting and the free radios in Austria and Germany are

already providing podcasts via their internet databases. So it is not something community radios are behind.

PdW: The 300 radio and TV stations in the Netherlands almost all have internet activities. They experiment with podcasting and all kind of other use of interactivity on the internet. But the main thing is, what is dangerous in saying "Why bother about traditional media, why taking part in conferences about DAB, we can podcast and have internet etc.?" The only radio on traditional FM television which is received in the household on the TV set and where people are sitting together to watch TV is a completely different thing than individually looking at a PDA screen of about that big. That is not TV, that is video on a PDA. Podcasting on where you have to login to your computer, connect your mp3 player with a usb2 cable with your computer. That is a completely other thing than turning on a radio here and searching for a radio station and listening to it. It is completely different. The new technology won't replace the old technology. The same as film didn't go away when television was introduced, radio didn't go away as TV was introduced. It adds up and the base of this new technology: if you have a good radio station you should invest in this new technology, and the most successful services in this new television and radio technology are driven by traditional broadcasters.

LS: On April 1st a nice article was published about the future of TV. Here – in the perspective of Peter Weibel – who says the population is going to divide into two groups of TV users. On the one hand there will be the passive users. On the other hand there will be people who are stressed, who order their programs to watch them once they have time for it. There definitely is some need of development here. But we must not forget that some people are technically not as integrated as we – as professionals in this field - would like them to be. Which means it is going to take some time until people can handle those persons. Peter Weibel says that there will be a transition period of roughly 10 to 15 years during which many people are going to learn from the internet and everything will come together, TV as well. I believe in this as well, and that is why our TV project is not centered on technology, I mean that is

an important part of it, but in the center there are the users, the producers, film makers and artists who can put their material onto the database and many people can access it. We know this from the internet, but still watching TV and listening to the radio is a very different feeling, and we don't know how long this is going to stay that way. Or not, maybe people will find out that in fact it is nice to watch TV or listen to the radio together. It does not necessarily have to change.

CL: There is also a financial aspect with this going digital. Already distributing these streams be it real life or on demand via archives costs a lot of money. And it really depends what are the relationships between the radio stations and some service providers. Some time it is free, sometimes it is very expensive, so it becomes impossible. We have to bear in mind that not everything is free. If the service provider doesn't have anything in return he only very rarely will give it for free.

VL: I would like to add that we are not only technical platforms but actually communication networks. Especially in regard on migrants we have to think about the digital divide.

End of panel discussion.

For further interest listen to the Presentation "EUREKA! – a solution for small-scale digital radio" by Pieter de Wit

Electro Lobby, ArsElectronica, 03. September 2005:

<http://www.aec.at/en/festival2005/podcasts/podcasts.asp>