Chronology

of the

parliamentary discussion

on the

Salzburg Assessment Value for Mobile Telephony Base Stations
(so-called Salzburg Precaution Value)

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Chronology

1. Summary

On 31 January 2002, the 92th session of the National Council of the Republic of Austria rejected

- the demands contained in petition No. 2 regarding mobile telephony, submitted by the Members Johann Maier, Gabriela Moser, and Martin Graf

as well as the pertinent bills

- Bill 55/A submitted by Member Gabriela Moser and her party colleagues in connection with a federal law amending the federal law on telecommunications (Telecommunications Act) Federal Law Gazette I No. 100/1997, last amended by Federal Law Gazette I No. 27/1999, and
- Bill 213/A(E) submitted by Member Gabriela Moser and her party colleagues in connection with a research programme on the effects of GMS emissions

This has concluded the debate over the Salzburg model, which is so important for the **development and expansion of the mobile telephony networks,** with the clear decision of the Austrian federal legislator to define limits only **on the basis of secured scientific evidence applied uniformly on a European level**.

In particular the Salzburg assessment value of 1 mW/m^2 power flux density for mobile phone base stations (**so-called Salzburg precaution value**), inherent to the Salzburg model, that was demanded by the mobile telephony petition and in bill 55/A, was **rejected** after a parliamentary inquiry was held and on the basis of a statement by the High Health Council and an expert opinion prepared for the EU Commission.

The Austrian **legislators expect** that "prior to the construction or modification of base stations, adjacent residents will be comprehensively informed in time about the respective construction activities". For flexibility reasons, however, legislators will refrain from issuing a legally binding order for these measures and shall rely on the existing **voluntary information activities of mobile telephony providers** for the population. The aim is to **introduce** a common **labelling** system for mobile phones with regard to their **SAR (Specific Absorption Rate),** and to resummarize and continue monitoring the **state of the art of international research** on the effects of mobile phone technology.

2. Affected mobile telephony bills and their contents

Petition No. 2 on mobile telephony

Petition No. 2 on the nationwide expansion of mobile telephony networks in Austria and related health, consumer, worker, youth, environment, economic, and legal issues (in short: mobile telephony petition) was submitted to the Austrian National Council on 30 November 1999 and contains a wide range of political demands in connection with the expansion of mobile telephony networks in Austria. The central demand of the petition is to apply the Salzburg model nationwide and to create legislation establishing the Salzburg assessment value of 1 mW/m^2 power flux density for mobile base stations (so-called Salzburg precaution value) as mandatory.

The petition argues that:

> "It is incomprehensible and irresponsible that the nationwide expansion of mobile telephony networks is being carried out without the corresponding citizen participation (e.g. taking part in the proceedings) and without the examination of its health and environmental compatibility. (...) It is therefore necessary to amend the Telecommunications Act – in accordance with the future federal law on non-ionizing radiation protection – and to standardize clear health-related guidelines toward preventive health protection and guaranteed co-decision of adjacent residents and communities. (...) The Salzburg model is a proof that compliance with the Salzburg precaution value of 1 mW/m^2 (0.1 μW/cm^2) power flux density for the total of GSM imissions and the expansion of the mobile telephony networks are compatible. Experience in Salzburg shows that the operation of mobile phones is possible even when the Salzburg precaution value is observed".

The main concern of the petition is reflected – against the background of the political wish to make the Salzburg model and its assessment value of 1 mW/m^2 mandatory on a nationwide scale – in particular in the following passages, the content of which was specifically chosen to fit into the wording of a decision by the Austrian National Council:

„„We call the National Council,
(...)
in particular:

1. to amend the Telecommunications Act (TKG) and the Tenancy Act (MRG) so as to allow adjacent residents and municipalities to participate in the proceedings, and to render information to tenants compulsory. (...)
2. (...) to establish the obligation for the operators to inform the public and to obtain approval for the respective installation sites. It would be possible to base the amendment on the provincial mandatory provisions of Salzburg (amendment to the law on the protection of architectural appearance and nature) that are to be further tightened after the decision by the constitutional and administration committee of 18 November, 1999;
3. to abandon the reference values of the International commission on non-ionizing radiation protection (ICNIRP) of April 1998 and the EU Council Recommendation of July 1999 derived therefrom, as well as the exposition values of ÖNORM S 1120 of July 1992 in connection with electromagnetic fields of GSM transmission stations. (...) It is the urgent task of politicians to replace the conservative threshold determination (aftercare principle) procedure of the ICNIRP/WHO by the precaution principle, analogous to the usual practice in other areas such as in food and drug policy. (...)
4. (...) it is necessary to establish the implementation of the Salzburg model and the Salzburg precaution value of 1 mW/m2 (0.001 W/m2 or 0.1 μW/cm2) power flux density as the nationwide mandatory precaution threshold for the total of GSM imissions, with a continuous adjustment to the current level of knowledge. (...)

5. to integrate into the Telecommunications Act the obligation to adjust existing GSM stations to the precaution value of 1 mW/m2 for the total of GSM emissions of mobile telephony transmission stations; (...)

16. to call the responsible ministers to introduce information campaigns independent from GSM operators (...)
17. (...)
18. to organize a parliamentary inquiry on mobile telephony in which to discuss the problem addressed by the petition and draw the necessary legislative conclusions. (...)“

Bill 55/A – Amendment of the Telecommunications Act

Bill 55/A was submitted to the Austrian National Council on 15 December, 1999 and the items contained therein closely resemble those of the mobile telephony petition. The essential intention of the bill is reflected in the following passage of the reasoning:

"Essentially, the bill under review is an implementation of the "mobile telephony petition" of 30 November, 1999 (...)."

As to the so-called Salzburg precaution value, the proposed par. 68(1) is most significant. It provides for the following:

"(1) Basically, the construction and operation of a mobile telephony transmission station requires an approval. Such an approval will not be granted, if

a) it cannot be ruled out with certainty that they pose no threat to the life and health of humans or are the cause of unacceptable inconvenience,

b) they adversely affect the property, other rights in rem or tenancy rights of adjacent residents,

c) they disturb the operation of other radio stations and receivers, and

it is not possible to ensure protection against these events by the corresponding provisions.
It also necessary to take into account the effects of high-frequency pulsed electromagnetic fields on medical devices and body implants, as well as on traffic and aviation safety. Immission values exceeding 1mW/m2 power flux density are not admissible. Sufficient safety distance must be kept to hazard zones in order to rule out considerable residual risks."

The explanatory remarks on this specific legal formulation proposal of the bill read as follows:

"68(7) Approval of mobile telephony transmission stations

(...) Taking into account particularly sensitive persons (e.g. persons with hearing aids or heart implants) and complying with the precaution immission limit of 1 mW/m2 power flux density.
(...)
According to par. 7, the existing transmission stations must be adapted to meet the requirements of the precaution immission limit. This is obtainable by reducing the transmission power.(...)“

Bill 213/A(E) – Research programme on the effects of GSM emissions

Bill 213/A(E) was subjected to the Austrian National Council on 5 July, 2000, and concentrates its argumentation on research deficits. The objective of the bill is:

> "The Federal Minister for Science, Traffic, and Telecommunications is called upon to commission a research programme on the effects of GSM emissions under the following conditions:
>
> 1. Establishment of an independent research fund, financed by the government's revenues from the sale of mobile phone licenses and by the mobile phone license holders at a ratio of 50:50
>
> 2. internationally coordinated Austrian research activities with an interministerial research focus on "health care with regard to electromagnetic fields", and
>
> 3. "Examination of the biological effects of electromagnetic radiation and phenomena" according to the research paper of the platform of GMS initiatives"

3. Information process on parliamentary level

The allegations in the mobile telephony petition that the mobile phone operators in Salzburg had promised to install a full-coverage mobile network in compliance with the Salzburg assessment value of 1 mW/m^2 and that a network fulfilling this requirement has been installed in Salzburg have been repeatedly denied by the mobile phone operators. This was done both in official press releases and events and in letters to the politicians in charge. tele.ring, for instance, writes the following in a letter dated 17 May, 2000 (see www.fmk.at/Medieninformation/Dokumente) to the responsible member of Salzburg's city government:

> "We (...) keep to our commitment to try and comply with the precaution values for the City of Salzburg, under the premise of technical and economic feasibility. (...) Once again, we point out to the fact that, as we have already informed Mr. Oberfeld in writing last year, the installation of a mobile phone network in compliance with the limits he proposed is technically unfeasible."

In dealing with the set of questions posed on a parliamentary level by the mobile telephony petition, the requested inquiry was carried out in addition to the parliamentary consultations, and conclusions were drawn in the High Health Council. Finally, on 30 October, 2001 the Scientific Committee on Toxicity, Ecotoxicity, and the Environment (CSTEE) presented its expert opinion on the "Possible Effects of Electromagnetic Fields (EMF), Radio Frequency Fields (RF) and Microwave radiation on human health" commissioned by the European Commission. This expert opinion was handed out to the responsible members of the parliament in the course of consultations on the mobile telephony petition.

The results of all three measures are clearly not in favour of the requested introduction of the so-called Salzburg precaution value, and do not suggest the need for stricter rules. Therefore there is a national and international consensus at an official level over the fact that the existing regulatory measures are adequate for preventive health protection.

Parliamentary inquiry on "mobile telephony"

The request for a parliamentary inquiry (Z 18 of the mobile telephony petition) was met on 20June, 2000 and constituted an important milestone in parliamentary opinion-making. **Joachim Röschke from the University of Mainz (Psychiatric Hospital)** explained the design, the course, and the results of his 1996 survey that constituted the sole basis for the demand for a so-called Salzburg precaution value, as follows (stenographic notes, 6):

> "The very first examination of the sleep EEG was – like the one already presented – a naturalistic study. This means that we were unable to continue controlling the marginal conditions of the study and did not do so either, except that it was once again a blind cross-over design. However, we were unable to make any statements on the effective field strength – because it was not measured; it was ***estimated*** on the basis of the 0.05 milliwatt (=500 mW/m^2, author's remark) per square centimetre already mentioned.
> The study comprised 14 healthy subjects. No hypothesis was established, the reason why such a study is described as explorative. We obtained the following results:
> Among the several parameters we examined – approximately 20 or 25 –, there was a reduced sleep-onset latency – SOL. This means that the subjects fell asleep considerably faster under the influence of the field. The rapid-eye movement (REM) part, this paradoxical sleep phase, was reduced – only enough to be statistically significant -, the REM latency, i.e. the time between falling asleep and the appearance of the first REM phase, was prolonged, the power density in the alpha band was increased, and the self-assessment questionnaires showed that in the next morning the subjects felt better rested, recovered, and with more energy under the influence of the field.
> How must we interpret this? – First, one must be very careful in interpreting the results, since this study design was explorative. This means that no hypothesis was examined. Several parameters were measured, and from these several parameters that we measured, those listed proved to be statistically significant. In total, this ***principally*** points out to an anti-depressive effect – this is how one can summarize the results, since most medicines we would use today to treat depression, an affective disorder, have exactly the same effects. This – in a nutshell – anti-depressive or hypnotic effect that was established allow us to raise the hypothesis that mobile telephones have exactly that impact. – I must point out clearly that, from a scientific point of view, this study cannot be used to draw any other conclusions".

In the course of the inquiry, **Professor Norbert Leitgeb** of the Institute for Biomedical Engineering at the Technical University in Graz (stenographic notes, 47) emphasized the following:

> "I shall be very brief, although it is interesting to point out that the actual sensations are very unobtrusive. I am not sure whether you have noticed that Mr. Röschke has made a very clear and precise statement. He said that his results ***do not*** contain any arguments in favour of threshold values. – He therefore clearly and unmistakably deprived the Salzburg limit of its foundation, since the limits set in Salzburg were derived from his results. I want to emphasize this very clearly, and, after all, it is quite a remarkable outcome for this event!“

The study cited here, which was used as a basis for the so-called Salzburg precaution value is expressly mentioned in the letter of the provincial health directorate of Salzburg of 25 February 1998, No. 9/12-62603 / 43-1998:

> "The work by Mann and Röschke in 1996, is not only the only published study of this kind. (...) The data contained therein must be regarded as hard facts. Therefore, it is not merely possible but also necessary to draw conclusions from the study results".

In the summary of the letter quoted above, the author once again confirms the following:

> "Since no proposals exist for threshold values in connection with the assessment of non-thermal effects of pulsed fields, we examined the literature available and used a study carried out in 1996 for the assessment. This study presents a high level of causality and is the only work that can be used to draw further conclusions".

During the parliamentary inquiry, Mr. Oberfeld also confirms using only this study by Röschke to derive the so-called Salzburg precaution value (stenographic notes, 53):

> "The limits derived from this study by Mann/Röschke in 1996, however, were defined with an additional safety factor of 500, similar to that usually applied in toxicology."

Joachim Röschke, University of Mainz (Psychiatric Hospital) also reported on the follow-up studies, and that they did not provided support for the hypothesis described above (stenographic notes, 7):

> "Since our second attempt intended to confirm the hypothesis failed, we deliberated on the problem for quite some time: Why did it fail? What could have been the reason for this? Essentially, two arguments remained: First, the field strength was not the same. It measured approximately half of what we had previously estimated. Therefore, field strength may have been the cause. So we decided: If this was the cause, this time we must do things properly and use field strengths close to admissible limits.
> We repeated the test with 5 milliwatts per square centimeter; we had initially estimated 0.05 milliwatt – i.e. we increased field strength by a factor of 100. This means that we went to the very limits of what is acceptable, and repeated the experiment. This time we had an even better sleep chamber and used an even better antenna so as to guarantee homogeneity. The results are briefly summarized in the illustration: We found no significant differences in the actual target parameters that served as our hypothesis, as reference values.
> For those interested, the next illustration contains a tabulated summary of all parameters we examined in this context. Nothing remains that comes even close to what is statistically significant.
> I will now come to the conclusion. Once again, I described the two important parameters for the REM sleep in an illustration: the REM latency and the REM part. In the middle, you can see the study we first carried out, i.e. the one that served to generate the hypotheses. Actually, we had a reduced REM part – the blue column is smaller than 100 percent – and a prolonged REM latency – the red column is larger than 100 percent. This is what generated the hypothesis. The next study – displayed on the left – shows the same trend, yet it is not statistically secured. In our last test – on the far right – during which we basically "stepped on the gas", we could find practically no evidence at all. So much for the study in our laboratory."

Resolution by the High Health Council

This resolution by the High Health Council on mobile telephony was adopted during the 4th plenary session on 18 November 2000. The responsible minister reported on this resolution to the Council of Ministers on 7 December 2000 (No. 20.006/8-VIII/1/00).

The High Health Council clearly rejects the definition of a threshold value in accordance with the so-called Salzburg precaution value for mobile phone base stations:

> "1. Previous epidemiological and experimental studies in mobile phone technology do not provide a secured scientific evidence of adverse biological effects on humans and animals.
>
> 2. In mobile telephony, the problem is less the transmitters but rather the terminals, because the power density decreases with growing distance.
> (...)
> 5. For all these reasons, we regard the current EU limits as acceptable (...)"

Moreover, the High Health Council proposes that summary reports on the latest results of mobile telephony research are issued at regular intervals (two years) and speaks in favour of the ALARA principle in maintaining the currently applicable regulatory measures proposed by the EU.

Expert opinion by the Scientific Committee on Toxicity, Ecotoxicity, and the Environment (CSTEE)

The following passage from the expert opinion commissioned by the European Commission briefly describes how the opinion came into being:

> "The Scientific Committee on Toxicity, Ecotoxicity and the Environment (CSTEE) was requested to prepare an update of the opinion (1) of the Scientific Steering Committee (SSC) on health effects of electromagnetic fields (EMF) dated 25-26 June 1998, which endorsed the guidelines published by the ICNIRP (International Commission on Non Ionising Radiation Protection) and served as a basis for the Council Recommendation of July 5, 1999, which limited the exposure of the general public to EMF."

The CSTEE was asked

> *"... to provide, in the light of new knowledge and developments in technology and applications of sources and practices giving the exposure to electromagnetic fields, an update of the opinion delivered in June 1998 on:*
>
> *ANon thermal, long term health effects of exposure to EMFs in particular addressing epidemiological evidence and also biophysical and biological evidence on genetic and carcinogenic effects, effects on the immune and circulatory system and effects on the nervous system affecting or local part of the body or general behaviour of people exposed. The opinion should indicate whether any new recommendations for exposure limits can be made.*

B. Whether for thermal and non thermal effects, the technical annex for the Council Recommendation (OJ N° L 199/59 dated 30.07.1999, remark by the author) setting up basic restrictions and reference levels limiting the exposure to non-ionising radiation and based on the guidelines published by the International Commission on Non-Ionising Radiation Protection is still the appropriate scientific basis for a system of health protection against risks from non-ionising radiation".

The conclusions of the expert opinion by the CSTEE (as of page 10) on these questions and thus on the reliability of the existing set of protection limits are as follows:

Answer to question A:

- The additional information which has become available on carcinogenic and other non-thermal effects of radiofrequency and microwave radiation frequencies in the last years does not justify a revision of exposure limits set by the Commission on the basis of the conclusions of the 1998 opinion of the Steering Scientific Committee. In particular, in humans, no evidence of carcinogenicity in either children or adults has resulted from epidemiological studies (the size of some of which was very large, although the period of observation was not long enough for a definitive statement). A relatively large series of laboratory studies has not provided evidence of genotoxicity. Subjective symptoms affecting some individuals possibly exists, but not enough information is available on the levels of exposure producing such effect, on the features underlying individual susceptibility, on the possible biological mechanisms *or* the prevalence of susceptible individuals in different populations. Thus, current knowledge is insufficient for the implementation of measures aimed at the identification and protection of a highly sensitive sub-group of the population. (...)

Answer to question B:

- On the basis of the information available to the CSTEE at the time of responding to this opinion request, the committee has insufficient scientific evidence, as to thermal and non thermal effects, to propose alternatives to the technical annex for the Council Recommendation setting up basic restrictions and reference levels limiting the exposure to non-ionising radiation, based on the guidelines published by the International Commission on Non-Ionising Radiation Protection."

This expert opinion was made available to all members of the traffic committee in the run-up to its session of 4 December 2001.

Negotiations in the traffic committee on the mobile telephony petition

During this session, the committee deliberated and voted on the bills described under 2. The report of the traffic committee (No. 913, page 2 of the attachments) notes on the voting procedure for the bills 55/A (Telecommunications Act) and 213/A(E) (Establishment of a research fund):

> "Bill 55/A failed to obtain approval by the majority of the committee.
>
> Bill 213/A(E) also failed to obtain approval by the majority of the committee.

With regard to the mobile telephony petition, a summary resolution proposal was developed after an amendment of the Telecommunications Act was disregarded. This resolution proposal did not include the demands of the mobile telephony petition for a nationwide introduction of the so-called Salzburg precaution value either. Likewise, other central demands that would eventually impair or prevent the expansion of the mobile telephony network were not included.

The reasoning of this resolution proposal reads as follows (No. 913 of the attachments, Annex 1):

> "The result of this inquiry was in particular the recognition that, as a rule, exposure of the human body to electromagnetic radiation in connection with mobile telephony operation results mainly from the use of terminals, i.e. mobile phones, while only a small part of this radiation can be attributed to stationary antennas on masts that many perceive as being particularly threatening due to their sheer size. The only cases with proven adverse health effects on humans are found with mobile phones, where pacemakers and other medical devices were affected in their function. (...)
>
> On the other hand, this misunderstanding shows that considerably more attention should be given to the information of the population on the potential side effects of this relatively new technology. This will undoubtedly lead to a more objective and more conscious approach toward mobile telephone technology, as well as to other facilities that emit non-ionizing radiation. The fact is, however, that all (television and radio) transmission facilities as well as innumerable daily consumer products (remote controls, ...) emit often much more intensive radiation of this kind, so that from an objective point of view, any limits imposed on such emissions would have to take into account all these radiation sources, as it is suggested by a statement of the High Health Council."

The final resolution proposal reads:

"1. The Minister for Traffic, Innovation, and Technology is requested to commit herself to the quickest possible introduction of a uniform labelling of mobile telephones with regard to the intensity of the electromagnetic radiation they emit.

2. The Minister for Traffic, Innovation, and Technology is requested to act within the scope of her responsibility so as to convince mobile telephony providers to inform adjacent residents about the respective construction activities comprehensively and in time prior to the construction or modification of base stations.

3. The Minister for Traffic, Innovation, and Technology is requested to submit to the National Council a report on the practical implementation of the so-called "site-sharing" by the mobile telephony providers and on the progress achieved in avoiding an excessive density of transmission masts, and, if necessary, a proposal for the amendment of the Telecommunications Act toward improvement of this provision.

4. The Minister for Traffic, Innovation, and Technology is requested to submit to the National Council a report prepared by independent researchers on the current level of international research in the effects of mobile technology.

5. After internationally secured scientific evidence has become available, the Federal Government is asked to continue working on a federal law serving the protection against non-ionizing radiation or on any other regulatory measures to limit radiation emission.“

The bill of the traffic committee to the National Council (attachment 913, page 5) reads as follows:

> "As a result of its consultations, the traffic committee submits the **bill** to the National Council in which the Council is asked
>
> 1. to adopt the attached resolution;
> 2. to take this report into account."

Deliberations in the National Council on the mobile telephony petition

On 31 January 2002, the 92nd session of the National Council adopted the aforementioned resolution proposal and took into account the report of the traffic committee, and rejected the nationwide introduction of the so-called Salzburg precaution value by the responsible federal legislator.

4. Conclusion

In concrete terms, the **so-called Salzburg precaution value** has been discussed and **rejected** by the responsible federal legislator. This clear decision by the responsible legislator **ensures the maintenance of the current set of limits in Austria** on the basis of the ÖNORM standards and the EU Council Recommendation of 12 July 1999.

The fact that a faction that has supported the introduction of the mobile telephony petition has abandoned its implementation after a comprehensive parliamentary process is a clear indication that the **political arguments in favour** of the introduction of the **so-called Salzburg precaution value** are **not backed** by the available **scientific** findings**.**

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