



AES

SWISS SECTION NEWSLETTER

89th Issue

Warning: In order to celebrate the return to work, this newsletter comprises two meeting announcements:

- 25th of September in Geneva: *So little boy stereo said: "When I grow up I want to be Multichannel"*
- 3rd of October in Bern: *Recording and Application of the 3-dimensional 2+2+2 Audioformat*

INFORMATION ON THE FIRST MEETING

Multichannel Sound Recording Practice

*So little boy stereo said:
"When I grow up I want to be Multichannel"*

(Joint meeting with AES French Section)

Thursday, 25th of September 2003, 17:00 at the Room B114 (building B, 1st floor)
of the School of Engineering, rue de la Prairie 4, 1202 Geneva

SPEAKER: Mike Williams, "Sounds of Scotland", Le Perreux sur Marne,
94170, France. soundsscot@aol.com

ORGANIZER: Véronique Adam

LANGUAGE: English (French)

Is multichannel really just an extension or evolution of the same psychoacoustical principles as in stereophony? We certainly can see the same trends in the development of microphone recording techniques and operational mixing techniques as were present in the stereo days. Again two distinct approaches are present, one working for the greatest number in the television and cinema industry, whereas the other is essentially a lone listener in the sweet spot! However neither has a monopoly of good multichannel sound reproduction.

The development of Microphone Array Systems for recording and reproduction, applied to both stereo and multichannel sound, is directly dependent on the psychoacoustics of the listening environment and the physics of the microphone array. In this presentation, Michael Williams will show how these same principles, that have been shown to apply to the analysis of stereophonic microphone arrays, can also be used in the design of a multichannel microphone array, and thereby achieve realistic natural reproduction of the sound field.

Using this process of Multichannel Microphone Array Design (MMAD), an almost infinite number of microphone configurations can be chosen to suit the needs of a particular sound recording situation. The basic characteristics of Front, Lateral and Back Segment Coverage, together with the process of Segment Offset used to obtain Critical Linking, are part of the main MMA Design process. However many other selection criteria must be considered in order to satisfy specific operational preferences or to obtain the optimum choice of a microphone array adapted to a particular situation. An analysis of a range of different selection criteria will show how it is possible to assist the sound recording engineer in choosing a selection of suitable microphone array configurations for his particular requirements.

Careful adjustment of microphone position is of course needed to achieve each desired configuration, both with respect to each microphone position coordinate and also the individual microphone orientation. The "wingspan" of an array must be capable of adjustment from a minimum of about 30cm to a maximum of a few metres. Independent adjustment must also be possible for the front triplet group of microphones and the back pair. A new approach to this problem will be presented, together with a practical demonstration of a prototype suspension system, with particular emphasis on the specific needs of MMAD.

In AES preprint 5336, presented at the 110th AES Convention in Amsterdam (The Quick Reference Guide to Multichannel Microphone Arrays, Part 1: using Cardioid Microphones), arrays were originally specified in the form of tables of microphone coordinates and orientations. As this form of presentation for each specific array configuration proved to be rather too cumbersome, a CD-ROM containing a full set of plan diagrams of arrays and some other useful documents was produced for subsequent conferences on the subject. The prerelease 0.2 of this MMAD CD-ROM will be distributed during the meeting. CD-ROM updates can be obtained from soundsscot@aol.com. A web-site is also under preparation at www.soundsscot.com

Please note that Michael Williams, who represents AES Publications sales in Europe, will be travelling back from the Top Audio exhibition in Italy, via Geneva for this Conference. Attendees at this meeting will therefore be able to see (and purchase) the full range of AES Publications together with a large selection of other high level English language technical books on audio engineering and recording practice.

Biography of Mike Williams

Michael Williams started his professional career at the BBC Television Studios in London in 1960. In 1965 he moved to France to work for "Societe Audax" in Paris developing loudspeakers for professional sound and television broadcasting, and later worked for the "Conservatoire National des Arts et Metiers" as Chief Engineer in the adult education television service. In 1980 he became a free-lance instructor in Audio Engineering and Sound Recording Practice, working for most of the major French national television and sound broadcasting companies, as well as many training schools and institutions. He is an active member of the Audio Engineering Society, and has published many papers on Stereo and Multichannel Recording Systems over the past twenty years. He is at present the AES Publications Sales Representative in Europe.

Schedule

- 17:00 Aperitif
- 17:30 Welcome and introduction
- 17:40 Speech of Mike Williams
- 19:30 Discussion
- 20:00 – 20:30 Transfer to optional dinner

INFORMATION ON THE SECOND MEETING

Recording and Application of the 3-dimensional 2+2+2 Audioformat

Friday, 3rd of October 2003, 18:00 at the Schweizer Radio DRS,
Konzertsaal, Schwarzerstrasse 21, Bern

SPEAKER: Werner Dabringhaus

ORGANIZER: Gabriel Leutzinger

LANGUAGE: English

2+2+2 Recording® is the compatible use of the 5.1 transmission medium for a system of 3-dimensional sound reproduction with three stereophonic channels. The 3D sound reproduction is provided through an additional pair of loudspeakers which can be operated alternatively to the 5.1 centre/subwoofer. That means, already existing multichannel recording infrastructure and DVD Audio reproduction equipment is used for this audiophile spatial format without electronic manipulation. It is a recording technique of music designated for multichannel reproduction, that allows a naturally 3-dimensional sound rendering widely independent of the listener's position. Is this the revolution before DVD Audio has established itself? Is it a useful impulse to stimulate the audio production business? This event will allow you to evaluate these questions.

Werner Dabringhaus will explain and demonstrate the advantages of the 2+2+2 Recording® in comparison to the 2-dimensional 5.1 surround and stereo formats. It will be shown, how the 2+2+2 format can be a solution for the well known problems introduced by a centre loudspeaker. He will report from his experience of setting up compatible recordings/reproductions, how the 2+2+2 format can simplify the production process and

the considerations required for media distribution of the 2+2+2 Recording®.

After this interesting speech and demonstration, an optional dinner will be held in a restaurant nearby (approx. 20h15), where the results of the assessment can be discussed further.

Biography of Werner Dabringhaus

Werner Dabringhaus was born in 1951 in Wuppertal, Germany. He received his degree as a "Diplom-Tonmeister" at the Musikhochschule Detmold. In 1978 he founded in Detmold together with Reimund Grimm the MDG "Musikproduktion Dabringhaus und Grimm oHG", which has been integrated into "Dabringhaus und Grimm Audiovision GmbH" in 1990. Besides his part-time activities as a contributor and lecturer, he is also responsible for the A&R section and the development of the sound performance at MDG.

Since 1999 Werner Dabringhaus is a member of the committee of CLASS, the "Association of Classical Independents in Germany e.V." and since 2002 he is a member of the committee of the VUT (Verband unabhängiger Tonträgerhersteller, Musikverlage und Musikproduzenten e.V.).

REPORT ON PREVIOUS MEETING

Sound Design for Film: Barbara Flückiger

(Joint meeting with SGA/SSA)

Thursday, 22nd of May 2003, 16:45 at the Auditorium of SUVA,
Rösslimattstrasse 39, 6005 Luzern

SPEAKER: Dr. phil. Barbara Flückiger

ORGANIZERS: Attila Karamustafaoglu / Beat Hohmann (SGA)

LANGUAGE: German

Around 50 participants gathered together in the large auditorium of the SUVA in Luzern. The arrangement of the seats was very suitable for film reproduction. To provide the right auditory environment, a 5.1 set of professional audio monitors was built up in the room. After a welcome of the chairmen of the AES and the SGA, Barbara Flückiger started her presentation, which contained selected topics of her Ph. D. Thesis. Pointing to the history of film theory, it was explained that in early times all directors used or had to use besides music and dialogs the soundtrack of film just to enhance the picture. So a gunshot on the screen had to sound as much as possible like a gunshot on the street. Her study of the mainstream film has shown that, besides some early pioneers, in the late 80s this rule has been broken and almost vanished until now. The link between the picture and the sounds is no longer in the visual sense but has more and more been moved towards the subjective perception of the viewer. Further Mrs. Flückiger has analyzed the methods of this kind of subjectivities and categorized them. For instance, in science fiction movies, there are events, which cannot be made to sound like "on the street". Two examples of this were the liquid-metal man in "Terminator 2" walking through a iron-barred door or the movement of a laser sword in "Star Wars". These sounds were created by dog-food and by

moving a fluorescent tube around the antenna of a broken portable TV receiver as B. Flückiger explained to the amusement of the audience. Like this, many examples of these subjective links between picture and sound have been demonstrated. For her studies Mrs. Flückiger has further defined a term called "UKO" or "Unidentifizierbares Klangobject" which is an unidentifiable sound object which can neither be seen in the picture nor be identified out of the context. Excerpts of "Das Boot" or "The Blair Witch Project" have been shown where a lot of "UKOs" could be heard. In a third part of her speech, methods of subjectivation have been shown, which are used by directors to make the spectator identify themselves with specific characters in the film. Elements like dissociation of sound and picture can subjectively tell a viewer that a figure in the movie is in a drunken or drugged state or hallucinating. Other often-used elements like that are heartbeats, breathing or vanishing of the sound, which can involve the viewer into the fiction. A last demonstrated excerpt, where this was used very effectively was "The Silence of the Lambs", where agent Starling is in the cell with the murderer and the lights go out and her nervous breathing is audibly louder than in reality.

A dinner in a restaurant nearby the SUVA building concluded this very interesting meeting.