AES SWISS SECTION NEWSLETTER

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INFORMATION ON NEXT MEETING

Enhanced Console Operation with Studer Vistonics

Thursday, 27th of November 2003, 17h30 – 20h00 at Studer Professional Audio AG, Althardstrasse 30, 8105 Regensdorf

SPEAKER: Stefan Ledergerber

ORGANIZER: Attila Karamustafaoglu

LANGUAGE: English or German

Now, as the digital revolution lies quite some time behind the industry for large audio mixing consoles the ergonomics and operation become more and more important. Especially the huge addition of functionality into a console requires operation concepts, which let the operator keep the overview over her or his work - the machine has to serve the user and not vice versa. On the other side, production time and flexibility has become so important that competitors fight with it for market shares. This applies to all branches, be it Radio/TV broadcast, live or standard music or film/video production.

One and a half years ago, Studer has presented a revolutionary desk technology called Vistonics within the product range called Vista. There, TFT screens with integrated physical control elements like rotary encoders, buttons and touch fields are used to maximize the ergonomics in console operation. Unlike older console surface concepts, the parameters can be visualized graphically at the location where they are changed which gives a large improvement for the operation.

The meeting will consist of a presentation of the basic concepts and a breakout session, where everyone is invited to experience this enhanced operation at the console in detail. Finally, the speaker will say a few words about the philosophical aspects behind the Vista console surface design.

As usual, an optional dinner will be held at the Trend Hotel nearby the company.

About the Speaker : Stefan Ledergerber

Stefan Ledergerber was born 1970 in Wängi (TG). Being a member of a family of musicians, he discovered from an early age the beauty of music and learned to play the flute. After his “Matura” he worked at Studer in the product support department for the hard-disk recorder Dyaxis. He then started his studies in electrical engineering at the ETH Zürich, where he wrote a diploma thesis on the topic of the DSP core of the D950/Vista and Route 5000 product series. He then joined the Studer R&D as a hardware engineer, working primarly on the DSP core of the above mentioned products. During that time he also did a lot of demonstrations of VSP (Virtual Surround Panning) where he got more and more in direct contact with clients. Stefan is today product manager for Studer’s large scale digital mixing consoles. During his spare time he is still active for classical music recordings.

REPORT ON PREVIOUS MEETING

Recording and Application of the 3-dimensional 2+2+2 Audio Format

Friday 3rd of October 2003 at the Konzertsaal of SR DRS, 3000 Bern

SPEAKER: Werner Dabringhaus, Dabringhaus und Grimm Audiovision GmbH, D-32756 Detmold, Germany

ORGANIZER: Gabriel Leuzinger

LANGUAGE: English

About 25 participants gathered at the Konzertsaal of Swiss Radio DRS in Bern to follow the speech and the demonstrations of Werner Dabringhaus about the 3-dimensional 2+2+2 Recording® technique. After a welcome apéro Werner Dabringhaus started with an explanation of the setup used for the comparison of the 2-dimensional formats stereo and 5.1 surround with the 3-dimensional 2+2+2 audio format. 2+2+2 Recording® is the compatible use of the already existing multichannel transmission medium DVD Audio and SACD. The 3D sound reproduction is provided by an additional pair of speakers, which can be operated alternatively to the 5.1 centre/subwoofer.

Three complete loudspeaker arrangements had been installed for this event by Giovanni Dolci of Dynaudio Acoustics and Thomas Wenger of J+C Intersonic: 5 active Dynaudio AIR-20 plus an active AIR BASE 1 Subwoofer were used for the 5.1 surround and for the stereo setup. Two additional AIR-6, elevated on stands to a height of half of the stereo baseline, together with the stereo and the rear pair formed the setup for the 2+2+2 arrangement. All speakers had been accurately adjusted and calibrated prior to the session.

Several situations exist in classical music, where the 3rd vertical dimension is very natural: starting from a slightly elevated position of a choir in a concert situation, to musicians and choirs on surrounding galleries in churches and of course, a large organ in a cathedral. Excellent, mainly classical recordings of his own label had been selected by Werner Dabringhaus for the demonstrations. Even in the very reverberant Konzertsaal, which has to be accepted as non-ideal for monitoring purposes, the differences between the three formats became easily apparent. Especially the organ demonstration of a 2+2+2 Recording® was very impressive to the audience, as the vertical dimension became very realistic and the playback reverb time of the Konzertsaal was no more determinant related to the reverb time of the recording itself. But also an outdoor recording of noises in a mountain area amazed the listeners by its realistic 3-dimensional experience. Werner Dabringhaus invited the audience to walk around to find the limits of the very wide sweetspot area. Switching back to 5.1 or stereo clearly reduced the spatial experience to 2 dimensions.

In contrast to the 5.1 cinema application, 2+2+2 Recording® has been invented primarily for music applications, but it can solve several problems introduced by the 5.1 centre speaker. As we all know, the centre speaker has to be positioned exactly on the same height and very precisely in half way between the front speakers. Furthermore, it has to be the same speaker type, since it forms two stereo pairs in the front. All these requirements can be achieved in a cinema behind a screen, but are usually a big problem in home applications, where a non identical centre is placed very often below the screen. 2+2+2 offers a very superior solution to that problem: not only it can create a virtual centre speaker, it allows the localisation of a sound source everywhere on a screen, horizontally AND vertically. This was demonstrated very impressive, when Werner Dabringhaus walked in front of the centre speaker and it became evident, the centre speaker of the 5.1 setup had been switched off previously and was virtually replaced by the 2+2+2 setup.

This capability can be used for compatible playback of 5.1 recordings on 2+2+2 speaker arrangements. Check out www.mdg.de for more information on that topic. High resolution Stereo replay is obtained from the first two 2+2+2 channels. 2+2+2 Recording® uses the non-compressed, 24-bit multichannel DVD Audio technology for storage and playback. Werner Dabringhaus emphasised the following points for equipment evaluation: a multi format player which is able to reproduce DVD Video/DVD Audio/SACD should be chosen. It must be checked carefully that the player and amplifier don't limit by mistake the .1 channel using a low-pass.

As in good old Stereo, a lot of different microphone arrangements can be used for 2+2+2 recordings. Werner Dabringhaus gave a very simple example of an arrangement for a 2+2+2 production of an orchestra: the main stereo mikes basically feed the two front channels (also used for stereo), the ambient mikes feed the two rear channels and the elevated stereo spot mikes are mixed to the two additional front-top channels.

At the end of his lively speech and impressive demonstrations, Werner Dabringhaus mentioned the importance for 2+2+2 Recording® that not only classical productions but also contemporary music has to be distributed on DVD Audio. 2+2+2 offers a lot of interesting and creative possibilities to the producer and 2+2+2 already got its own flag for the MLP™ (Meridian Lossless Packing) bit stream to identify the format.

About 10 participants extended the discussion after the meeting with an optional dinner at a nearby restaurant.