# AES SWISS SECTION NEWSLETTER

**78th Issue**

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**INFORMATION ON NEXT MEETING**

## Joint Meeting with Swiss Acoustics Society

### *SURROUND SOUND IN CONTROL ROOM DESIGN*

Thursday 15th of November 2001, 17h30 at Radio DRS, Konzertstudio, PS6A, Schwartztorstrasse 21, 3007 Bern

SPEAKERS:    Dirk Noy, WSDG

Christophe Anet, Genelec

ORGANIZERS:  Patrick Roe & Beat Hohmann    LANGUAGE:    English

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The last Swiss section meeting of the year will be a joint meeting with the Swiss Acoustics Society and will be held at the Radio DRS in Bern on the 15th of November on the topic "Surround Sound in Control Room Design".

Dirk Noy of WSGD will start the proceedings with a presentation encapsulating four main themes:

- General Issues of Control Room Design
  (programming, ergonomics, sight lines, access)
- Control Room Acoustics
  (Symmetry, room geometry for Surround Sound, reflection free zone, reverberation times for Surround Sound, low frequency absorption)
- Speaker Placement
  (various Surround Sound standards, SBIR effect console reflections, speaker loading, speaker installation)
- Case Studies
  (Das Werk / PhilippeMoritz - Zurich
  Sony Oxford Demo Room - New York City
  The Mach 2 - Milano

Christophe Anet, of Genelec, will then give a presentation entitled "A Survey Study of Today's Monitoring Conditions" The in-situ responses of a total of 372 loudspeakers in 164 professional monitoring rooms around the world have been measured after acoustical calibration. All measured rooms have been equipped with factory calibrated three way monitors and acoustically calibrated with standardized apparatus. The results provide a thorough understanding of typical monitoring conditions for stereo and multi-channel rooms, distribution in room parameters and quality of reproduced audio. Results are compared to current standards and recommendations.

A dinner will be organised after the meeting.

## Biographical Notes

**Dirk Noy** has a Diploma in Experimental Solid State Physics from the University of Basel, Switzerland and is a graduate from Full Sail Center for the Recording Arts, Orlando, USA. Since joining the Walters-Storyk Design Group in early 1997 he has been involved in numerous international small and large room acoustical design and consultation projects. Since late 1997 Dirk Noy heads WSDG's European Liaison Office in Basel, Switzerland. Dirk has extensive experience in Applied Mathematics, acoustical measurement and calculation techniques, audio engineering, systems design and all facets of Information Technologies. His language abilities include German, Dutch, French and English. As a publishing member of the Audio Engineering Society (AES) and the Swiss Acoustical Society (SGA) he is operator and beta tester for acoustical software applications such as simulation and/or measurement programs on Windows platforms. Dirk Noy is also lecturing Acoustics at SAE (School of Audio Engineering) in Zurich.

**Christophe Anet** was born in Geneva, Switzerland, in 1968. He studied Acoustics and Electronics at the University of Salford (UK), and he graduated in 1994 with a B.Eng. (Hons.) in Electroacoustics. In 1995 he joined FM Acoustics Ltd., in Zürich, where his work included technical marketing and support to the R&D. Since 1997 Mr Anet has been holding the position of customer support acoustic engineer at Genelec. Based in Lausanne, Switzerland, his main responsibility is to perform worldwide on-site measurement and calibration of the large Genelec monitor system and consulting customers with problems or questions regarding audio reproduction and loudspeaker installation design. Mr Anet is also giving lectures and seminars on room acoustics, psychoacoustics, loudspeakers technology and multichannel audio.

# REPORT ON OCTOBER 4 MEETING 2001

## *SOUND REINFORCEMENT GOING DIGITAL?*

at Radio DRS, Studio 2, 8057 Zürich

Speaker:      Andy Cooper, Yamaha R&D Centre, London, UK
Reporter:     Markus Erne, Scopein Research

More than 45 participants gathered for the Swiss Section AES-meeting on „Sound reinforcement going digital" at the Radio DRS in Zürich.

Andy Cooper who flew in from London in order to give an in-depth presentation on the Yamaha PM-1D digital live console, started with a short overview of the history of digital consoles in the past ten years. In 1991, the first small-scale digital mixers became available and later in 1996, the first digital mixing consoles for use in PA-applications were introduced.

A digital PA-mixer should not only be reliable, road-worthy and light-weight but it also should be easy to use, offer instant recall and automation and provide good sound quality at a reasonable price.

Digital consoles offer a lot of benefits such as: extra channels and features in a small space, on board EQ, dynamics and delay on each channel, a digital patch-bay, surround-sound capabilities, automation, fewer cables and off-line editing capabilities.



*Andy Cooper of Yamaha R&D Centre with Swiss AES Section members*

In contrast to all these advantages, the design of a digital console is a real challenge, due to the increased flexibility and the assignability of DSP-power and user interface controls.

First the layout of the console is extremely important but especially for live-applications, reliability (software, bugs, UPS, backup, redundancy, diagnostics etc.) is an important feature of any digital console.

Additionally the console should offer a clever stage-box concept and provide high sound quality, simulating the smoothness and warmth of analog consoles.

In the near future, digital consoles may integrate plug-in effects, signal splitters and integrate a loudspeaker system management. Additionally digital micro-phones will make analog cables obsolete and in general, the cabling will become smaller, lighter, may be, even wireless. Additionally, the remote access to digital consoles for programming and diagnostics will be improved and the comfort for the user may be improved as well.

Andy reported that well over 100 consoles have been sold and with 48 up to 192 channels, 48 mix busses and 24 Matrix outputs, the PM-1D is well prepared for applications in mobile recording, event broadcasting, sound reinforcement, stage monitor systems and FOH mixing.

Andy provided an impressive demo of the console which by Yamaha Switzerland has been brought-in for the AES-meeting and finally many of the participants took full advantage of getting a hands-on experience of the console.

Lots of questions and discussions followed during the dinner where more than 20 participants gathered.