

## Metris in 2005

Metris has become a serious partner for many research and development centers across the world over the past years. We have built the fundamentals for a strong company with innovative and reliable solutions for animal behavior analysis. Our products have already gained their credits in pharmaceutical research and have simplified rodent behavior research in many different ways.

Metris is ready for a next step. Our goal is to achieve strong, honest and long-term relationships with our customers, to offer tailor-made solutions and to be able to meet the changing needs of our customers now and in the future. Therefore, we have initialized growth of our product portfolio by introducing new products and continuous development of the present products with the introduction of new releases and service contract plans.

To accomplish this growth, we have started with expansion of our team. We have attracted specialists to focus on different expertises in our company. In this Vibes we will introduce our new employees who are in contact with our customers. In addition to CEO Ronald Bulthuis, our new Director Michel Schless will be responsible for all Marketing and Sales activities.

Michel has obtained his experience in several large companies, such as Fokker Aviation and KPN Telecom. At Metris, he will be the primary contact for all commercial activities, of existing distributors and he will be responsible for the expansion of the distribution network worldwide.

Marco Hooijer is responsible for Production and Support. He is the contact for the technical support of Laboras and SonoTrack (read more about SonoTrack in this newsletter).

Levon Bachdasarian has reinforced our team for the development of new products and innovation of our existing product portfolio. His strong background in pattern recognition and signal analysis will ensure a continuous development of our products.

New teammember Marleen Duinkerken will focus on e-commerce activities and will be responsible for promotional activities in general. Marleen just graduated in Media Science at the University of Amsterdam.

Director Ronald Bulthuis: "Metris is ready for a new phase in the existence of the company. We are eager to turn our ambitions into reality. Professionalisation of the organization, partnerships, products and services is our target. All this with the sole purpose to offer you professional solutions and a long-term relationship! I am very happy with my new team members and I have full confidence that 2005 will be an exciting year!"

### In This Issue

- 1...Metris in 2005
- 2...Product Release: SonoTrack
- 3...An expert opinion on SonoTrack
- 3...Agreement TNO and Metris
- 4...New Releases LABORAS
- 4...Good 'LABORAS' Practice (GLP)
- 5...Continue LABORAS-GLP
- 5...Share our developments
- 5...Metris vibes on the Internet
- 5...Metris Conference Calendar
- 6...Service Contract Plans
- 6...International Distributors

### Colophon

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From left to right: Marco Hooijer, Ronald Bulthuis, Michel Schless and Marleen Duinkerken. Unfortunately Levon Bachdasarian is not on this picture.

## Product release: SonoTrack

We are proud to introduce our new product SonoTrack in this first issue of the Vibes. We offer you this unique system from the first of March 2005. The production has started mid-February and the first orders have been placed. In this article you will find a summary of this new product.

### The SonoTrack system

SonoTrack is a new and non-invasive measurement method to monitor and analyze ultrasonic sounds produced by (laboratory) animals. Unlike many other systems that are based on bat-detectors, SonoTrack uses a special microphone and hardware that can pick up sounds in the frequency range of 15kHz to 100kHz (with a normal microphone the frequency range can be extended down to frequencies as low as 20 Hz). The sounds picked up by the microphones are recorded in digital format and can be converted into audible signals. The unique graphical presentations of the signals in the SonoTrack software enables the user to analyze the sounds or 'animal language' in much more detail than ever before.

### Unique features

#### Full Spectrum analysis

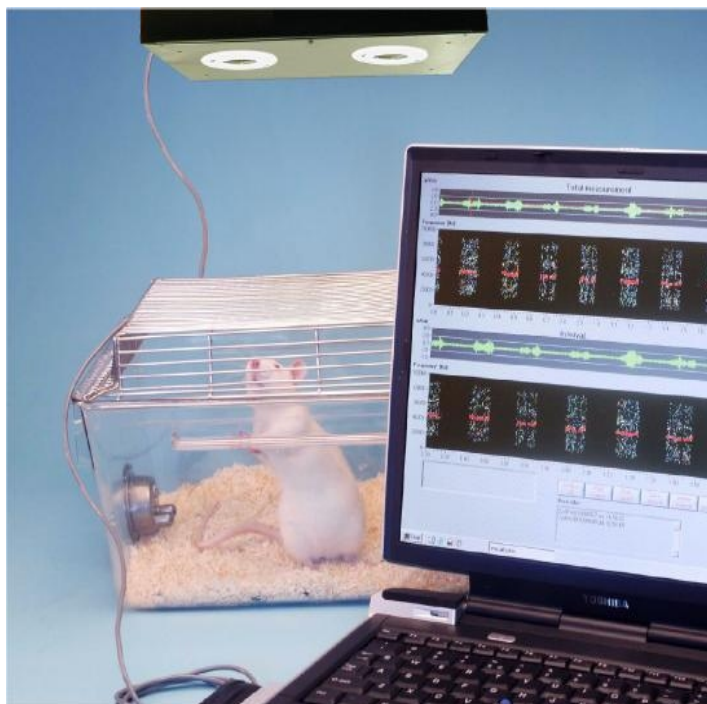
The system allows real-time recording of the full sound spectrum (up to 100kHz). SonoTrack not only records the number of ultrasonic peaks in a limited frequency band (as systems based on bat recorders do), but SonoTrack gives the researcher much more in-depth information on the characteristics of all ultrasonic vocalizations of their animals.

#### Multi channel continuous recording

The SonoTrack system can simultaneously record up to four channels. SonoTrack offers the possibility to record only those periods in which ultrasonic vocalisations exceed a user defined level, to playback recorded sound signals and to export them as commonly used .wav files.

#### Various presentations of ultrasound information

Ultrasonic vocalisations are presented in different 'domains' using 2D and 3D graphs. Besides presenting the raw sound signal in the time domain, SonoTrack offers the researcher e.g. frequency graphs, spectrograms and sonograms. All graphics can easily be copied to other Windows applications or directly be printed for further analysis.



#### High Performance Microphones

The use of very sensitive microphones enables SonoTrack to detect and record low level ultrasonic vocalisations. Background noise is effectively eliminated by the small opening angle of the applied microphones. To have sufficient coverage when used with rodent home cages (type II and Type IIIh) each microphone unit uses two microphones.

### Applications

Ultrasonic vocalisation (USV) are sounds (frequency range of 20kHz to 100kHz) above the human range of hearing. However, it is known that among others, rodents produce and hear USV as part of their behaviour. There is evidence that USV is used as a sensitive indicator of subtle emotional and motivational changes in a number of species. Therefore, USV produced by animals in various conditions could be explored as a non-invasive method for registering the welfare status of animals. A few applications are for example: laboratory animal

welfare research, pain research, toxicology/ safety pharmacology, behavioral pharmacology or transgenic animal research.

For detailed information about the SonoTrack system please surf to the SonoTrack product information on our website.

For enquiries please send an e-mail to [info@metris.nl](mailto:info@metris.nl) or contact Marco Hooijer for technical details or Michel Schless for commercial enquiries: both can be reached on telephone number: +31 (0) 23- 554 2250.

*A Sound Idea!*



## An expert opinion on SonoTrack

Mrs. Herma van der Wiel, project manager and researcher at TNO Laboratories in the Netherlands, is one of the initiators of the concept of the SonoTrack. She has also been a frequent user of SonoTrack during the realization and test phase. Herma shares her experience and findings with us: "TNO uses the SonoTrack system to establish the general behavior of the rodent around the clock. Deviant behavior can easily be determined during research. This way, the use of SonoTrack has simplified research methods for us."

The use of ultrasonic sound analysis has been a "forgotten" method for us and many others in the industry due to the complexity of the research. With the introduction of SonoTrack at our laboratory, the research at TNO has been simplified, because we can collect a lot of information with very little effort. SonoTrack makes it easy to notice if an animal is comfortable or not. This offers the researcher the possibility to adjust or abort the experiments to spare the animal additional pain and discomfort".

SonoTrack contributes to the three R's of animal research:



**Refinement:** SonoTrack gives the opportunity to gain a lot of information without additional harm

**Replacement:** SonoTrack replaces complex and intensive animal research

**Reduction:** SonoTrack provides more information with fewer tests

## Agreement SonoTrack by TNO and Metris

The development of SonoTrack is a cooperation between Metris and TNO, the largest independent research organisation in The Netherlands. TNO has been responsible for the development of the software for ultrasonic recording and analysis.

TNO has already gained a lot of knowledge on the ultrasonic vocalisations of animals. It is acknowledged that the exploration of the ultrasonic vocalisations has a great future. Experts believe that it offers many new possibilities.

Metris and TNO have joint their expertises for the development of SonoTrack and on the first of March 2005 they have signed an agreement to prolong their partnership. The agreement was signed by Ronald Bulthuis, Metris CEO, and Gerben Klein Baltink, TNO Market Director of the Defence, Safety and Security department; formally known as the TNO Prins Maurits Laboratory (PML).



From left to right: Michel Schless, Ronald Bulthuis, Herma van der Wiel (manager high tox. Facility TNO), Cees van der Leden (Data Acquisition Consultant TNO) and Gerben Klein Baltink (Director Market Defence, Safety and Security TNO)

In the next issue of Vibes:

Special feature on the integration of Laboras and DataScience telemetry equipment.

## New Releases LABORAS

### LABORAS Release 2.0

Metris offers a new LABORAS release from May 2005; release 2.0.

The new LABORAS version 2.0 will have an improved graphical user interface and adds a number of features that were suggested by customers.

☑ All screens in the new LABORAS 2.0 can be directly printed to any printer that is available in Windows, including the screens showing the position track, position distribution and raw sensor signals.

☑ In the new version it will also be possible to export the track as AVI file, so the user can easily playback the track outside the LABORAS software. Playback of tracking data in LABORAS can either be at real time speed or fast forward.

☑ In addition to this, the navigation tree for selection of your existing experiments or test sessions is further improved to make working with LABORAS even more convenient and easy.

### LABORAS 2.0 - GLP

In July 2005 we will release a LABORAS 2.0 - GLP version, that assists researchers to comply with international requirements of Good Laboratory Practice (GLP). The article below provides additional information.

For commercial or technical enquiries, please send an e-mail to Michel Schless or Ronald Bulthuis via [info@metris.nl](mailto:info@metris.nl).

### Behavior Recognition Modules

Metris is planning a series of releases in 2005. During the year we will release new behavior recognition modules such as specific pain research, open field test and mice rearing. In consultation with our customers we plan to develop more features to enable different areas of research.

#### Software Release Planning

April	May	July	August
	LABORAS Release 2.0	LABORAS Release 2.0 GLP	

#### Behavior Recognition Modules Release Planning

April	May	July	August
Specific Pain Research (rats)	Open Field Test (mice)		Rearing (mice)

### LABORAS

is the most reliable and powerful system for automatic registration of small laboratory rodents. Besides tracking movements, a large range of specific behaviors is being distinguished by the software. The systems works for long periods, independent of light conditions and without observers.

## Good 'LABORAS' Practice: LABORAS and Good Laboratory Practice

### What is GLP?

GLP is a quality system for laboratories producing non-clinical safety data of chemical or pharmaceutical products. It covers the entire organisational process and the conditions under which non-clinical safety and environmental studies are planned, performed, monitored, recorded, reported and archived. GLP principles are drawn by the Organisation for Economic Co-operation and Development (OECD).

In this intergovernmental organisation 30 industrialised countries in North America, Europe, Asia and the Pacific region, as well as the European Commission, work together to harmonise international problems such as health and environmental safety.

### Why GLP?

The purpose of GLP is:

- ☑ To promote the development of quality test data
- ☑ To foster mutual acceptance of test data
- ☑ To avoid duplicative testing
- ☑ To avoid the creation of technical trade barriers
- ☑ To improve the protection of human and animal health environment

**The upcoming LABORAS - GLP version is important for laboratories in Safety Pharmacology & Toxicology**

## **Continue LABORAS and GLP**

### **Checking GLP compliance**

On the request of (inter)national regulatory and/or monitoring authorities, audits of specific studies are performed frequently. These audits are in-depth reviews of studies, with the objective to reconstruct the study by comparing the final report with the study plan, relevant SOPs, raw data and other archived pertinent material.

### **Implications for computerized laboratory systems**

All computerized systems used for the generation, measurement or assessment of data intended for regulatory submission should be developed, validated, operated and maintained in ways which are compliant to GLP requirements.

### **FDA regulations**

The FDA has formulated their standards in 21 Code of Federal Regulations (21 CFR). Part 11 of the 21 CFR (21 CFR/Part 11) gives guidance for the use of digital signatures.

### **LABORAS compliance to GLP and 21CFR/Part 11**

In the current version of the LABORAS software, the administration, data acquisition and result modules already were extensive. Metris' software engineer Herman Eldering, who developed the LABORAS user interface, has made a number of adjustments to reach GLP and 21CFR/Part 11 compliance, such as:

#### **\* Login/User accounts**

In the GLP-version of LABORAS only predefined authorized users can login. This is to ensure that only fully qualified personnel operates the system. In the 'Administration' module the various users can be defined in the user accounts.

#### **\* File authenticity & integrity**

All data that is acquired with LABORAS is coupled to the digital signature of the user that logged on. All files that are opened are checked for this specific digital signature. Data manipulation outside of LABORAS is therefore not possible.

#### **\* Audit trail**

This module will record all operations executed by the (authorized) user to allow audits for government institutions.

**Release of LABORAS 2.0 - GPL Module**  
LABORAS 2.0 - GPL will be released in July 2005. For purchase or technical information please send an e-mail to [info@metris.nl](mailto:info@metris.nl)

## **Share our developments**

What is in the pipeline of the Metris Development and Innovation department? We want to share our ambitions, plans, developments and achievements with our clients, partners and suppliers. To keep you up to date, we distribute a quarterly newsletter "Metris Vibes". An announcement will be sent by e-mail and from that moment the Metris Vibes can be downloaded on our website [www.metris.nl](http://www.metris.nl). Not interested in our newsletter or have you received our newsletter from a colleague, but you want to be on the mailing list personally? Please send an e-mail to [news@metris.nl](mailto:news@metris.nl). Please mark 'subscribe' or 'unsubscribe' in the subject field. Don't forget to add your own name, your company name and position.

## **Metris Conference Calender**

You can find Metris, or a representative, at the following conferences in 2005:

- ➔ IBNS/ International Behavioral NeuroScience Society  
1-6 June in Santa Fe USA
- ➔ Measuring Behavior  
30 August-2 September in Wageningen The Netherlands
- ➔ EBPS/ European Behavior and Pharmacology Society  
9-12 september in Barcelona Spain
- ➔ SPS/ Safety Pharmacology Society  
26-28 September in Mannheim Germany
- ➔ Society for Neuroscience  
12-16 November in Washington D.C. USA

## **Metris vibes on the Internet**

The website is a portal for all your questions and information: from the first of June the website will undergo a complete make over. With actualized information and new features, such as a customer database, a literature database and, in the future, e-commerce options. Newsflashes and developments will have a prominent place on the website. We will keep you informed!

Metris will profile itself in many different ways this year. Seminars, partner programs, participation in conferences and other events are on our program for 2005. Opposite to this article you can read at which conferences you can find us this year.



## Service Contract Plans

The LABORAS system is an advanced system that requires proper maintenance procedures to ensure optimal performance. Based on requests from customers, Metris offers four levels of maintenance and service contracts:

- ☑ **Non-Warranty:** we will always try to assist you but availability of personnel cannot be guaranteed on short notice and costs for labor and travel will be fully charged to the customer. Projections show that a single unplanned support visit exceeds the cost of the preventive service contract.
- ☑ **Preventive Maintenance Contract:** supports the correct performance of the system. This service is advised for customers that aim for quality of research.
- ☑ **Service Contract Plan Light:** in addition to correct performance this service plan supports the correct performance and continuous operation. This service is advised for customers that aim for quality of research and continuity of their drug development processes.
- ☑ **Service Contract Plan All In:** fully support the correct performance and continuous operation within a fixed yearly budget. This contract is advised for customers that aim for quality of research, continuation of the drug development process and strong budgetary management.

Pricing is dependent on the service level (type of contract) and the location (country) of the customer. All customers will be approached by Metris for a selection in service level one quarter before the expiration of the warranty.

Customers with a service contract plan will receive a periodical service bulletin with recommendations.

## Overview Service Contract Plans

Type of contract	Preventive Maintenance	Labour & Travel Costs	Parts	Software *	Discount hardware***	Discount software releases	Priority Response
<b>Non-Warranty:</b>	Per Visit	Per visit	Per case	Per case	No	No	No
<b>Preventive Maintenance:</b>	Included	Per visit	Per case	Per case	No	No	No
<b>Service Contract Light:</b>	Included	Included	Per case	Included	Yes, 10%	No	Yes
<b>Service Contract All-In:</b>	Included	Included	Included **	Included	Yes, 10%	Yes, 10%	Yes

Metris is always available to answer your questions or to help you solve a problem. Our helpdesk is free of charge for Service Contract Plans 'Light' and 'All-In' customers. 'Non-warranty' and 'Preventive Maintenance Plan' does not include the online helpdesk. Customers will be charged per call. A quotation will be provided after the problem is analyzed. For all customers potential costs to solve a problem are dependent on the type of service contract, severity of the problem and customer location

\* Minor Upgrades of and bugs fixes within the same main software version (e.g. 1.0 to 1.1, etc)

\*\* Consumables are not covered by the contract. Consumables are for example cages and cage accessories

\*\*\* Hardware includes replacement parts (screws or reference weights that are for example lost) and consumables (additional cages and cage accessoires).

## International Distributors

### Japan

PrimeTech  
Tel: 81-3-3816-0851  
Fax: 81-3-3814-5080  
www.primetech.co.jp  
Info@primetech.co.jp

### Austria, Germany, Denmark, Switzerland & Scandinavia

Plexx  
Tel: 31.481.377797  
Fax: 31.481.377910  
www.plexx.nl  
info@plexx.nl

### Taiwan

Kuo Yang Scientific Corp.  
Tel: 886-2-22196600  
Fax: 886-2-22191717  
www.kuoyang.com.tw  
info@kuoyang.com.tw

### Slovenia & Croatia

Dvojica  
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