

# TechnoTalk

The TASC Newsletter

Volume 13 Number 5

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## Editorial

Welcome to our May edition of TechnoTalk. I first need to make an apology to our readers for incorrect information provided in the April Editorial. The Great Talking Box Company and not PRC manufacture the e-talk communication device as I mentioned. Technability are the sole distributors in Australia for this product and should be contacted for technical and pricing information.

For our readers interested in seating you will find Catherine Webster's article on Pressure Mapping provides a great overview of the literature and use for these systems.

As I have not included useful websites for some time I felt it was time to give you some sites to visit over the winter months.

TASC is hosting a session by Tracey Bode of Zygo. She will be providing information on new and updated products from Zygo Australia. Details on registration are included in this newsletter.

Finally TASC will be making changes to subscription to TechnoTalk as of July 2004. Please see Page 4 for more information.

Happy reading  
Jo Ford

## Review of Pressure Mapping

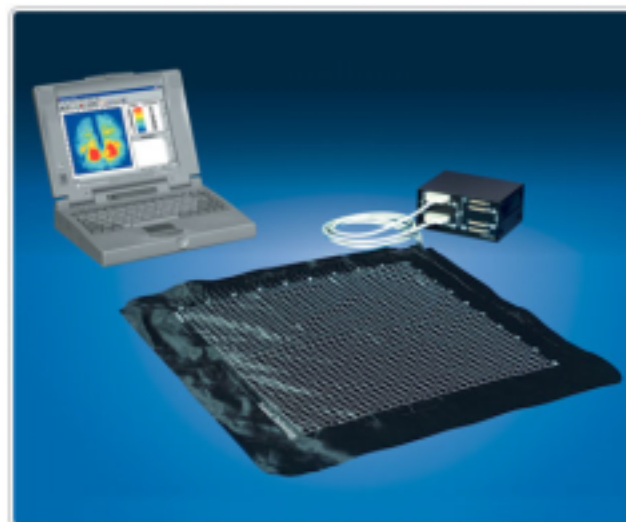


by Catherine Webster

Earlier this year TASC purchased an Xsensor Pressure Mapping System. There are different brands and types of pressure mapping systems on the market, however the general characteristics and principles of pressure mapping are likely to be related to many systems available. Pressure mapping can be utilised on a number of different surfaces, however this article will focus on its applications to seating systems.

### What are pressure mapping systems?

"They are computer-based systems that include proprietary software, pressure pads in a variety of sizes, an interface box, and a computer that is commonly a laptop". (Swaine, J., 2003).



Xsensor Pressure Mapping System

are placed over the cushion and/or backrest, allowing the person to sit or rest upon the mat/s. The computer will then output a graphic display of the pressures that have been detected by the sensors in the mat. The graphics present the pressures in millimetres of mercury and also colour-code the pressures

### What does pressure mapping do?

The pressure pads of different systems have varying capabilities, but contain many individual sensors within the pads. These pads look like mats (a system may have 1 or 2 mats depending upon the chosen configuration). The mat (or mats, if you have access to more than one)

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THE SPASTIC CENTRE

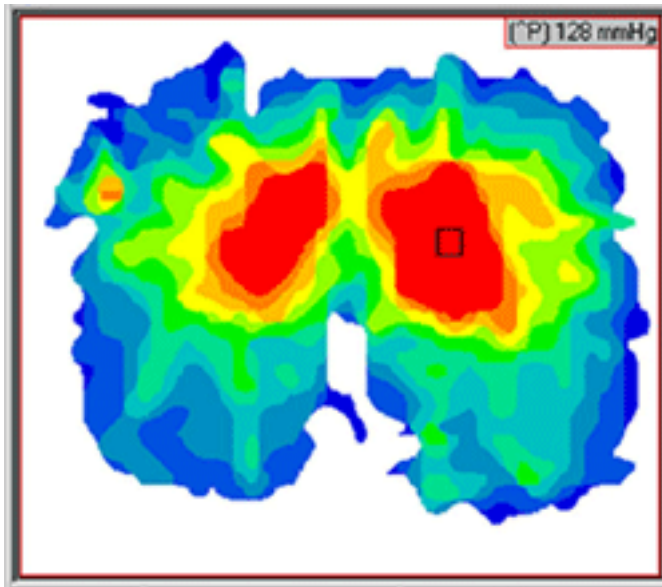
The Spastic Centre A.B.N. 45 000 062 288 \* (The Cerebral Palsy Association), 189 Allambie Rd, Allambie Heights NSW 2100  
PO Box 184 Brookvale NSW 2100 Phone 02 9972 8183 Fax 02 9451 9215 Email [tasc@tascnsw.org.au](mailto:tasc@tascnsw.org.au)



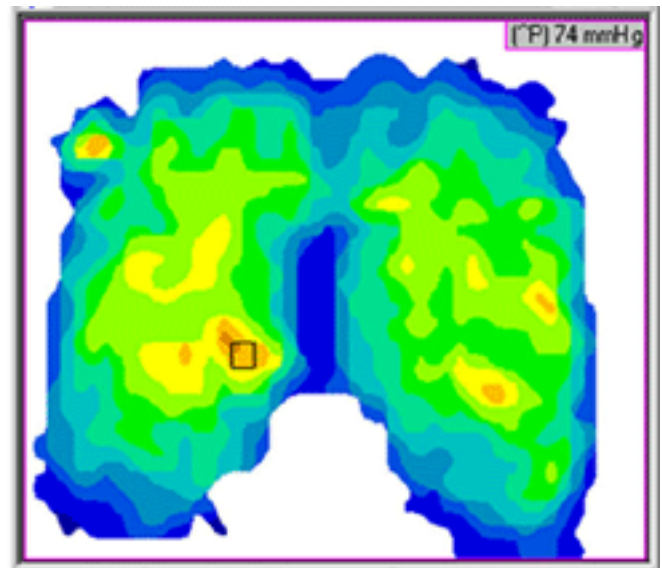
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according to a scale, making it easier for those viewing the image to determine which pressures are higher than others. (This is a standard feature, however with the Xsensor System it is possible for the therapist/user to re-calibrate the colour code according to their specific needs).

Pressure mapping may provide the following capabilities, that therapists can employ to guide or support their recommendations:



Pressure measurement shown on patient without a cushion on a standard wheelchair support surface. Red (darkened area) indicates high pressure



Patient now seated on cushion. Note the pressure distribution is optimal (reduced high pressure areas) and this solution is ideal.

- Presentation of pressure distribution asymmetries and areas of peak pressure distribution.
- Comparison of pressures exhibited with different cushions, seating systems and surfaces (Note: this needs to be assessed in relation to the individual person's results sitting on various cushions).
- Comparison of different wheelchair configurations and set-ups (also related to individual results).
- Identification of the level of contact or 'fit' provided within a contoured seating system (especially useful if the client has difficulty communicating this).
- Improved understanding of correct positioning and pressure relieving techniques, for the client and team, due to visual feedback provided.
- Improved client and team decision making, due to increased education and understanding.

- Identification and evaluation of pressure care management strategies, related to the seating system.
- Client and carer education.
- Affirmation of clinical decision making.
- Support for equipment selection and funding submissions.
- Increased access to a greater number of clients, due to potential use of laptop with system.

If the system is dynamic, it can demonstrate how changes in posture associated with certain activities may contribute to the amount of pressure that is exerted, at any one period of time. Dynamic pressure mapping can also be used to identify useful techniques for relieving pressure.

### Conclusion

Pressure mapping is a useful tool that can be used within the assessment and evaluation stages of seating and positioning interventions. However, it is important to remember that it is just one resource that can be used by the therapist. Pressure mapping must be used on an individual basis; it is not capable of supporting general conclusions, such as one cushion providing superior pressure relieving properties over all others. Most importantly, pressure mapping should be used when there is an identified need indicated by results gained from interview and postural assessment. A holistic approach to seating

and pressure care management (including knowledge of potential causes, risks and treatments affecting pressure problems and use of a sound pressure mapping protocol) needs to be employed to ensure successful results for individual clients. Pressure problems can have a number of causes and may not only be related to static sitting in a seating system (Shappcott, N. & Levy, B., 1999). If pressure mapping is used in this framework, with effective clinical protocols, it has the potential to supplement and re-affirm clinical decision making and further guide the course of seating and positioning interventions (Taylor, V.C., 1999).

## References

[www.xsensor.com](http://www.xsensor.com)

Shapcott MS, Levy B. By the numbers. Making the case for clinical use of pressure measurement mat technology to prevent the development of pressure ulcers. January 1999. pp. 16-19.

Swaine J M. Seeing the difference. The Interdisciplinary Journal of Rehabilitation. [www.rehabpub.com](http://www.rehabpub.com). November 2003.

Taylor V.C. Pressure mapping clinical protocol. 1999 Canadian Seating and Mobility Conference Handbook. Pp. 66-67.

Williams M. Grace under pressure: An introduction to pressure mapping. Seating Department, Shriners Hospital for Children – Tampa Unit, Tampa, Florida.

## Additional Resources

- [pressuremapping@coolist.com](mailto:pressuremapping@coolist.com) – pressure mapping listserve.
- [www.seatingdynamics.com](http://www.seatingdynamics.com)
- Australian Wound Management Association
- [www.jillianswaineots.com](http://www.jillianswaineots.com)
- Krizack M. Access and technology: Portable interface pressure mapping unit could save lives around the world. Disability World (A bimonthly web-zine of international disability news and views. Issue No. 4 August – September 2000.

## Website Reviews

**Title of page:** Assistive Technology (AT) Resource Reviews

**Last update or copyright date:**

**Title of site:** Family Center on Technology and Disability (FCTD)

**URL:** <http://www.fctd.info>

**Last accessed:** 24<sup>th</sup> May 2004



### Review:

This website provides information on assistive technology (AT) to service providers and families. The site includes AT resource reviews and a resource library. There are also links to many other sites of interest.

The Assistive Technology (AT) Resource Reviews page provides you with access to hundreds of reviews of assistive technology resources such as website and software which have been evaluated by the FCTD staff. You simply check off the areas that apply to your query, eg. computers/software/autism and it provides you with a list of resources from the database.

This is a great website for parents as it has a glossary of AT terminology and is user friendly to navigate.

Although this is an American organisation most of the information has a generic application and therefore is still very useful.

# ZYGO Australia

Sydney

*Invitation to attend presentation*

at The Spastic Centre of NSW  
Training Room - head office building  
187 Allambie Road  
Allambie Heights NSW

time 11.00 a.m. to 12.30 p.m.

day Thursday 17th June 2004

This session is kindly being hosted by TASC. It will be of interest to Speech Pathologists, Occupational Therapists, Educators and others involved with Assistive Technology. This session is an update on **new** and improved equipment from ZYGO Australia — voice output communication systems for people without functional speech.

There is no charge to attend the session, however a **RSVP by 11/6/04** would be appreciated for planning purposes. It would be appreciated if you could email or phone ZYGO Australia regarding your attendance. Please feel welcome to pass this information on to others who may be interested.

### Contacting ZYGO Australia to RSVP:

Phone 1800 818 353 (free call)

Email: [zygoaus@bigpond.net.au](mailto:zygoaus@bigpond.net.au) (Tracey)

This is the new **Talara-32** with most of the features of a Macaw but at an incredible price of **\$1400**. It features 4 levels, flexible key patterns, scanning modes, no restriction on recording per key - simply a total of 45 minutes of recording time.



**The adVOCate** is a stylish hand held device offering direct and switch/scanning access, flexible key patterns, 5 levels and 16 minutes recording time.

### The Dialect & Optimist

The Dialect is a dedicated communication device and the Optimist is a full Pentium touch screen PC. Running Speaking Dynamically Pro or The Grid it is now priced at \$6000 for a special package.



**Polyana 3** has 64 MB RAM and a new low price. With 'ready-to-go' scanning in addition to direct keyboard access (NOW with a keyguard) it will suit a wide range of people.

**Your presenter:** Tracey Bode has a Speech Pathology and Applied Linguistics backgrounds, and has managed ZYGO Australia since 1993. With prior clinical experience in alternative & augmentative communication she aims to relate her equipment knowledge to your interests with practical examples and case stories.

## CHANGES TO TECHNO TALK SUBSCRIPTION AS OF JULY 2004

As of July 2004 TechnoTalk will be available to download from The Spastic Centre website.

### What this means for our subscribers:

- You may wish to continue your subscription and receive a hard copy at \$27.50 for 11 editions.
- You can also give us your email address and we will send you a reminder when the newsletter is on line, at no cost.

With the June Edition of TechnoTalk we will include a form for you to fill in. So let us know how you would like to continue receiving the TechnoTalk Newsletter.

*Please note that this is not relevant for Spastic Centre Staff.*

*We welcome any feedback, good or bad, that you have on our service.*

*Please feel free to contact us by phone on*

*02 9972 8183, email at [tasc@tscnsw.org.au](mailto:tasc@tscnsw.org.au) or in writing at the address on the front page.*

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