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*"It sounds like many are feeling the pinch due to low construction activity, reduced national and local budgets, the credit crunch and the diversion of funds to the Christchurch recovery"*

## Issue 015, March 2012

### From the Chair...

Season's Greetings and a Happy New Year to you all, I trust you had a long and relaxing holiday and managed to find a spot with good weather, good fishing and no phone coverage! I myself managed to find my way south to the central North Island for a spot of water sports before the weather closed in.

While taking in the sights around the North Island I noticed a real lack of roading and earthmoving projects. Recently, while talking to different laboratory managers around the traps, I listened to many tell me of the notable downturn in testing demand compared to previous summers. It sounds like many are feeling the pinch due to low construction activity, reduced national and local budgets, the credit crunch and the diversion of funds to the Christchurch recovery. As a result many have reduced staff numbers or are taking on work they wouldn't normally get involved in.

The forecasting I read lately, tells me that I shouldn't expect things to improve until late 2013. So what do we do? Some are cutting costs, selling off unused gear or moth balling. Others are looking further a field for work, and some are taking longer holidays. CETANZ recommends the following:

Keep marketing  
Cut expenses and track cash carefully  
Start collections at 30 days past due  
Improve communications with your customers  
Add value, not price  
Under promise and over deliver  
Network, network, network online and offline  
Consider adding staff  
Focus on efficiency  
Train staff  
Try something new  
Ensure staff morale is maintained

And while I'm at it .....

Go to the CETANZ conference. Talk to your peers and learn from others. This year's theme focuses on the business of doing the business and registrations are open now. You can register a group of people or spread them out over the coming months to reduce the impact on your monthly bottom line. The CETANZ conference is a fantastic opportunity to improve your profile by presenting a paper and the call for abstracts is out now. Get exposure by sponsoring with the many small low cost opportunities for companies to get their name out there. This year we will also be offering a door prize and a prize for the best presentation. Visit <http://www.cetanzconference.org.nz> for more information.

Recently we held our first committee meeting for the year, where we were reminded of the up coming AGM and the need to ensure we have volunteers ready to join working groups or stand for election to the committee itself. If you're keen to help out or want to get involved please come along to the next meeting on the 11<sup>th</sup> of May. In my experience the small amount of effort pays off.



### *From the Chair Continued...*

We also heard that sadly, Jennie Dingley is leaving us to travel abroad. Jennie has been on the committee for four years and has lead the Careers and Events group and contributed to the organising of conferences. Thanks Jennie and we wish you well. And thanks to BECA for allowing Jennie to devote time to the CETANZ cause.

The enrolments for the new qualification are coming along nicely. We currently sit at a total of 45 for the level 4 and level 5 qualifications. The first assessor moderation is set for 26<sup>th</sup> of June and I look forward to catching up with our assessors and talk about how we can get more technicians enrolled.

I hope you enjoy this issue of CETANewZ, and please tell us about what's going on in your neck of the woods.

Jayden Ellis

Chair - CETANZ



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## *From the Editor...*

Welcome to the 16th edition of CETANewZ, we hope you enjoy it!

It's threatening to be a busy year for CETANZ and the involvement of the Careers and Activities group as a subcommittee to the CETANZ committee is mainly focused around the CETANZ conference later this year. The organising group made up of myself, Sarah Amore, Brigitte Sargent, Steven Anderson and Jayden Ellis have been meeting regularly since August last year planning this event which takes place at the Auckland Viaduct Events Centre in August. We have also employed the help of John Walker from Podium Conferences to oversee the organising of the event. We have had John on the team in the past and really appreciate his professional approach and commitment to our society.

In past years we have struggled to get the level of sponsorship we have aimed for but this year we are very pleased with the response already received (and we hope to gain a whole lot more). The reason for this could have something to do with our approach to the cost of sponsorship. The different approach this year has been to split the sponsorship into more categories and offer them at a reduced price. This seems to be working very well with a variety of sponsors on board already.

The focus now remains with the speakers and presentations and we had confirmation last week that Steve Killeen has accepted an invite from CETANZ to deliver the keynote address. Steve holds the position of Executive General Manager for Downer and is a great fit with the theme of the conference "Taxes, Training, Testing & Technology" Having started in the industry as a site operative Steve progressed to contract management before moving into general management roles. He has since held senior management positions and directorships in both consulting and contracting organisations.

Steve has a passion for collaborative working and driving improvements in safety, customer service, innovation and productivity through teamwork. He has participated in a number of alliance leadership's teams and industry improvement initiatives, including NZTA's current Highways Business Improvement Project. We are all looking forward to hearing Steve's insight and are glad to have him on board!

I strongly urge you to consider presenting a paper at the conference in August. Not only is it a fantastic way to present yourself and your ideas to the industry but it is a very relaxed forum to gain some public speaking experience and to share thoughts with your peers. After all, this is what it is all about and afterwards you will feel a sense of accomplishment in having done something that has benefited not only yourself but the industry as well! I recall speaking with a CETANZ member after the conference two years ago and he said to me "Michael, I really wished I'd presented a paper this year and now I guess I'll have to wait two more years before the next opportunity!" Two years is a long time to wait so why not get out of your comfort zone and put your name forward to me, with a topic, to [mjm@geotechnics.co.nz](mailto:mjm@geotechnics.co.nz)

In other conference news, we have an outstanding dinner speaker booked who we think you will all enjoy hearing from. We have moved away from the comedy act this year in order to provide a speaker who will talk about his life experiences and I'm sure we will all take something away from it. Please visit [www.cetanzconference.org.nz](http://www.cetanzconference.org.nz) for more information on the conference and I hope to see you all there in August.

That's all from me, I hope you enjoy this edition and as always please email me with your thoughts and feedback and anything else you'd like to see in here! Register for the conference and I'll catch you all next time.

Michael McGlynn

Editor - CETANZ



## Road Roughness Testing in New Zealand

By Steve McCone

### What is road roughness?

Roughness is a measure of quality of ride on the road. Generally a rough road can have issues of noise, safety, increased maintenance, increased wear on vehicles and ride comfort.

We measure our roads in NAASRA counts, simply put, the number/height of bumps over a measured distance.

### Some definitions

NAASRA=National Association of Australian State Roading Authorities.

RAMM= Road Assessment and Maintenance Management.

IRI= International roughness Index. (IRI can be converted to NAASRA counts with a simple equation)

NAASRA count= NZ accepted measure of road roughness.

Road Roughness is measured for two main reasons in New Zealand

1. It's a useful tool for monitoring road networks. Many councils check their full sealed road network. Measured on a regular basis, the data is used to view the overall state of the network. The roughness is entered into the RAMM database, and used to help determine when maintenance is needed.  
NZTA monitors the complete NZ motorway network once per year with a specialist unit that measures roughness, profile (Rutting) and skid resistance.
2. It's used as a quality tool for new roads, reseals and repairs. By setting a minimum specification for roughness, a client has an assurance of quality of finish. There has been some friendly competition between contractors in New Zealand to make the countries smoothest motorway.

Measure types in New Zealand.

1. Profilometer. A measuring device used to measure the actual variation of the road from flat. Uses a transducer to measure variations from horizontal vs. distance. Normally in the wheel track. Not used a lot in New Zealand, because of speed and cost. However is accurate and is commonly used as the base for calibration of response cars and lasers.
2. Response car. Fits into two types
  - Quarter car. (called a "response type road roughness measuring system", RTRRMS) Uses a fixed rear axle, and measures vertical displacement of the axle vs. distance travelled. It is calibrated on known roughness (eg by profilometer) at fixed speeds of 30 to 80km/hr.
  - Half car. Uses measures on both wheels of a vehicle with independent rear suspension. These systems are the most common in NZ. Being cost effective, having a known history and a 'direct' feel for the quality of pavement. Normal reporting unit is NAASRA count.  
Can be effected by manhole covers, bridge joints roundabouts etc, giving higher than actual readings.
3. Laser/ultrasonic profilometers. Works on the same principle as the profilometer. By using a laser or ultrasound to measure lateral variations on one or two wheel tracks vs. distance. The data is calculated into roughness. Normal reporting value is IRI. These systems can gather more data than just roughness. The more advanced systems can measure texture and profile (rutting). Generally more expensive and can be subject to inference. Eg dirty roads, wet roads and macro texture variations.

Roughness is speed dependent, higher speeds on the same road change the ride quality. The lower the NAASRA count the smoother the ride.

A NAASRA of 30 to 50 for a motorway is considered smooth, while a count of 50 to 70 is acceptable for a chip seal road.



Figure 1: an example of a full width laser set up, fitted with cameras





# Ground Penetrating Radar (GPR)



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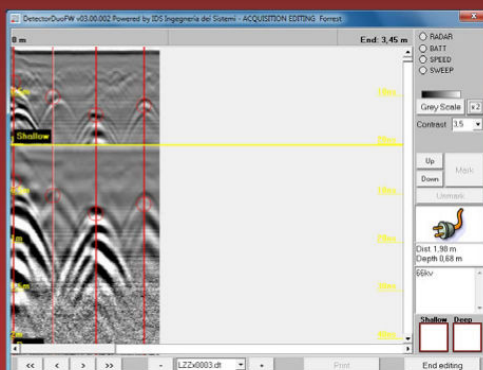


## Applications

- Locating underground services
- Locating burst pipes
- Measuring pavement thickness
- Measuring concrete slab thickness
- Identifying geological or manmade anomalies

## Advantages

- Detects non-metallic services eg. fibre optic, water pipes, ceramic pipes, drainage pipes
- Non-destructive
- Rapid setup, locating and mark-out
- Compact and manoeuvrable
- Real time detection
- Post processing of data available



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## ***Update from the CETANZ Technical Group 02/03/12***

***Last Meeting 02 February 2012***

***Next Meeting 27 April 2012***

The meeting was held at Stevenson in Drury

The group worked on the following items:

- Proficiency Program for 2012
- Accredited Sampling for a Third Party
- ASTM D6926: 04 & D6926: 10
- Technical Reports and Technical Guides for the CETANZ website
- NDM testing by non-IANZ accredited laboratories, specifications not detailing the need for IANZ accredited Laboratories.
- Request for IANZ to review "Temporary Laboratory" Policy
- CETANZ newsletter content.

We also had updated reports from the NZS 4407 review, IANZ new policy release and the review of AGS format guide.

Items completed since last newsletter:

- Plasticity Index and Linear Shrinkage Proficiency report. (see website)
- Penetration of Bituminous Materials Proficiency report (see website)
- Newsletter articles written and completed.
- Formal request for IANZ to review "Temporary Laboratory" policy submitted
- Asbestos in Recycled Concrete guide. (see website)
- PSV proficiency has been completed and analysis is underway.

The Technical Group has been quite busy since the last newsletter. Many of our projects are being completed and new ones started. The Proficiency program below will start shortly with the Technical Group looking for volunteers to help with sample preparation and scheme design.

Category	Test
Aggregate	Clay Index
Soil	Standard Compaction
Concrete	Compression & Density Tests
Field	(Regional) NDM
Bitumen	ServoPac

The Technical Group has consulted with IANZ regarding the "Accredited Sampling for a Third Party" Issue. IANZ has noted that requests had been received asking if laboratories could accredit sampling by technicians from other accredited laboratories when the client for the test results was a third party. The issue was discussed and the Technical Group agree that the solution IANZ propose is workable. IANZ will be sending a letter to each Laboratory detailing the new process.

A CETANZ member asked if the Technical Group could review ASTM D6926: 04 & D6926: 10 for a suspected typo. The Group has assigned this task to Grant Bosma and ask him to advise the relevant committee at ASTM if needed.

## ***Update from the CETANZ Technical Group Cont...***

Another issue raised by several CETANZ members regarding the specification of IANZ accredited laboratories for testing in several recent contracts, was discussed at length. It appears that several contract documents and local body codes of practice are deficient in this area and are allowing testing to be carried out by only "Suitably Experienced Staff", without the need for IANZ accreditation. The following actions are being taken:

- CETANZ will be highlighting issues at next IPENZ forum in March and the next NPTG meeting with NZTA in late February.
- IANZ will ensure its people tasked with promoting benefits and liaising with such organisations are informed and make contact.
- CETANZ will register formal requests that these issues be rectified with the appropriate organisations.

Note: all documents that CETANZ reviews, specifications both national and local, are always checked against this requirement. It is our policy to fully endorse the requirement to specify the need for IANZ accredited Laboratories for testing and we have done so many times over the last 24 months.

IANZ reported back on the request from the technical group to review the "Temporary Laboratory" Policy, particularly some of the time frames and conditions. IANZ has reviewed and decided that any suggested changes would not add value.

Our next meeting is planned for the 27<sup>th</sup> of April at Stevenson Drury Quarry and the Technical Group would like to take this opportunity to invite any CETANZ members to attend. Come and find out what we are up to and learn more about our industry. Please contact me at [jse@stevensons.co.nz](mailto:jse@stevensons.co.nz).



# Taxes, Technology, Testing and Training

Registration and Call for Abstracts  
is now open at  
[www.cetanzconference.org.nz](http://www.cetanzconference.org.nz)

## CETANZ Conference 2012

8 – 10 August  
Viaduct Events Centre  
Auckland, New Zealand

CETANZ



Civil Engineering Testing Association of New Zealand



## Careers & Events Report

The Careers and Events group met in late January to plan the year ahead for 2012. The primary focus in 2012 for the group will be the upcoming Conference in August. So, start writing your papers now! In addition to August's Conference, there are three regional events planned for the year. The first is scheduled for Christchurch, later in March. Northland and Tauranga are the other regions where the Careers and Events group plans to hold events during the year. The regional activities are one of the ways CETANZ gives back to the members, so I would strongly recommend you support CETANZ with your attendance when there is an event in your region.

As for the careers side of things, the technician qualification designed in conjunction with Infratrain is going well, with approximately 40 enrolments. This is a great way to boost your staff member's knowledge of testing and is completed on-the-job. For those enrolled in the technician qualification, LinkedIn is a good place to start discussions with other CETANZ members about information required for assessments. You won't be given the answers, but by using this medium, you can be pointed in the right direction.

The Careers and Events group have been investigating ways to increase the civil engineering testing industry's profile within schools. As the technician qualifications are completed while employed by a laboratory, at present, one of the best ways to increase awareness about civil engineering technicians and testing is for laboratories to approach secondary schools and build relationships locally. Several ideas for longer term strategies to entice more people into the civil engineering testing industry include working in conjunction with secondary schools and gateway providers; working with Work and Income New Zealand and joining forces with other qualifications and industries.

Unfortunately, this is my last Careers and Events update for CETANZ, as I am off to see the sights in Germany and the northern hemisphere. The Careers and Events team leader role will be taken on by Sarah Amooore until the AGM in August, after which a new team leader will be appointed from the new committee. Thank you for the opportunity to work for and with you over the last three and a half years.

- Jennie Dingley

Chive,  
Our friend came over to babysit last night.  
Got home and this photo was my new screensaver



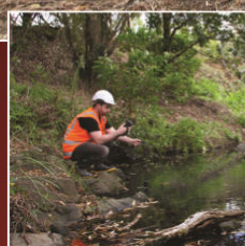
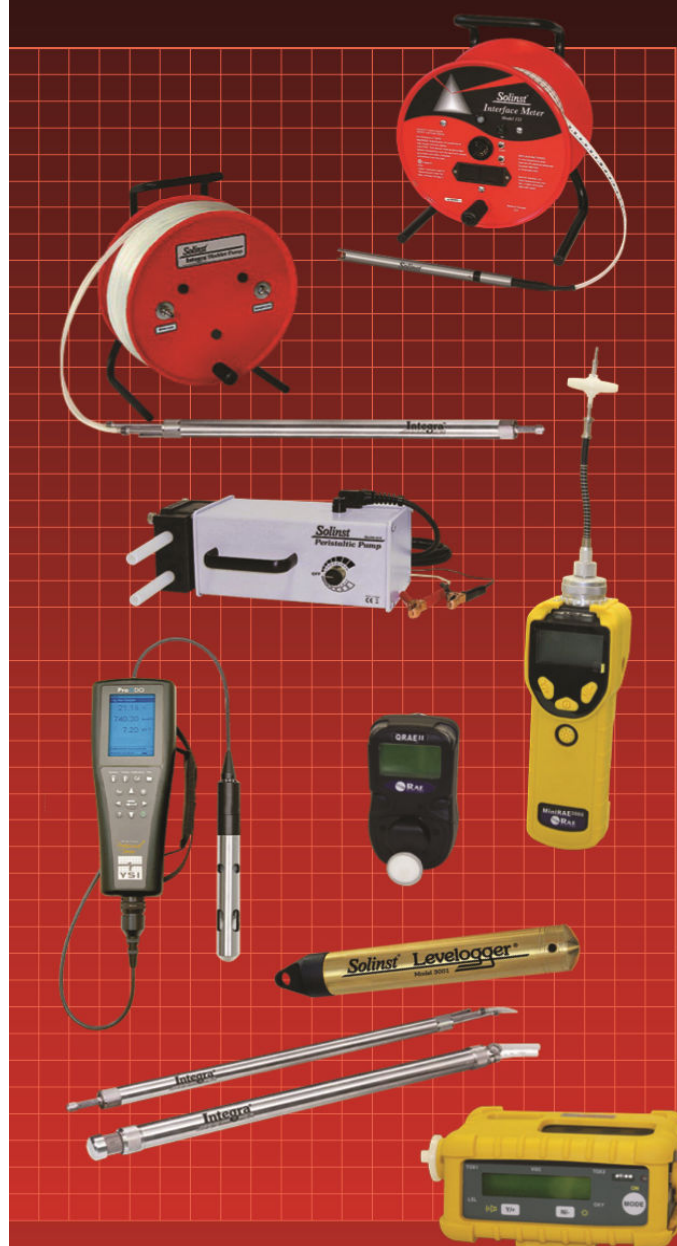
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## TG2 – Asbestos in Recycled Crushed Concrete

CETANZ Technical Guideline (TG) TG2 – Asbestos in Recycled Crushed Concrete

TG Number: TG2 Author: Jayden Ellis

Revision number: 0 Issue Date: December 2011

### 1 INTRODUCTION

**WARNING:** Recently more and more requests are being received by the Civil Engineering Testing Laboratory industry to carry out testing work on crushed recycled concrete and demolition materials. In several instances these materials have been found to contain quantities of Asbestos.

This document has been created to help raise awareness of the issue.

### 2 ASBESTOS

Asbestos-based products were widely used in construction from the 1920s to the mid-1980s. Commonly used products that contained asbestos included

- Floor tiles –backing of vinyl, asphalt, rubber floor tiles, adhesives-for installing tiles.
- Water pipes, steam pipes, boilers, furnace ducts – insulation material,
- Textured paint.
- Sound proofing and decorative material – sprayed on walls and ceilings.
- Imitation brick cladding.
- Door Gaskets-furnaces, woodstoves, coal stoves.
- Plaster patching compounds-walls and ceilings.
- Roofing material, shingles and sidings.
- Gutters.
- Artificial ashes and embers.
- Fireproof gloves, stovetop pads, ironing board covers, and certain hair dryers.
- Automobile brake pads, linings, Clutch facings and gaskets.
- Cement Sheets, Millboard and Paper.

### 3 HEALTH RISKS

- Asbestos is a health risk if it becomes airborne.
- Fibres of small size (4 µm or less) when inhaled reach deep into the lungs.
- These fibres can cause diseases that can develop over 15 – 20 years.
- Health conditions caused by asbestos exposure include asbestosis, lung cancer, mesothelioma and other various cancers or pulmonary conditions. Anyone who suspects they were exposed to asbestos must inform their doctor and seek regular medical exams to test for signs of asbestos-related disease. CETANZ Technical Guideline (TG) Page 2 of 3

### 4 TYPES OF ASBESTOS

- Chrysotile - white asbestos-most often used
- Crocidolite - blue asbestos-thought to be the most dangerous
- Amosite - brown or grey asbestos.

### 6 PRECAUTIONS AND ACTIONS TO BE CONSIDERED

- Stop

Do you know if the sample came from an Asbestos Free Site?

If you suspect presence of Asbestos, STOP all testing work, keep samples wet, do not crush or break materials down further, keep sealed until material can be tested for Asbestos.

- Test before you Test

Any recycled crushed concrete aggregate, demolition material or soil samples received from unknown sites or sources where there is no known definitive history or record of presence of Asbestos should be treated as potentially containing Asbestos.

Testing should be carried out immediately by the appropriate Laboratory.

**Asbestos Testing Providers:**

Dowdell and Associates, Auckland (09 526 0246)  
Capital Environmental Services, Wellington (04 566 3311)  
K2 Environmental Ltd, Christchurch (03 384 8966) or Auckland (09 377 1261).

- **Get more Information**

For more information visit Occupational Safety and Health Guidelines for the Management and Removal of Asbestos  
[www.osh.govt.nz/publications/booklets/asbestos-management-removal/guidelines-13.asp](http://www.osh.govt.nz/publications/booklets/asbestos-management-removal/guidelines-13.asp)

- **Seek Advice**

Seek advice from trained professionals and have a Hazard ID, Hazard Risk Analysis and Safe Operating Procedures (including appropriate PPE to wear) documented. Notify your staff and carry out the appropriate training. Each individual organisation will need to assess the risk and produce their own procedures.

- **Certified Handler**

Do you have the appropriate authority and training to handle Asbestos? There are two designations “Restricted Type Work” and “Not Restricted” Check with Department of Labour and seek more information.

- **Disposal**

Materials containing Asbestos can only be disposed of in facilities approved by local authorities. This can be a costly exercise. Ensure that you follow correct procedure for packaging and labelling before you transport. You may elect to return to the organisation that requested the testing in the first instance.

Check OSH website before you transport or dump.

## **7 DISCLAIMER**

The information in this publication is to encourage high standards within the civil engineering testing industry. The document is intended as technical information / warning for CETANZ members only and in no way replaces New Zealand standards or OSH requirements. CETANZ cannot accept any liability of any sort for unsafe procedures carried out by Companies who are members of CETANZ or organisations who claim to be following these guidelines. CETANZ assumes no responsibility for any harm, loss or damage, which may arise from reliance on the guideline and disclaims all liability accordingly. Specialist and/or legal advice should always be sought on any specific problem or matter.

## **REFERENCES**

Department of Labour  
BRANZ  
Dowdell and Associates  
Capital Environmental Services  
K2 Environmental Ltd



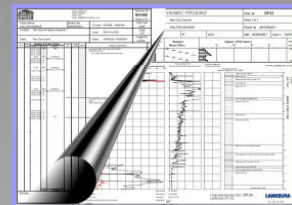


## The UK's leading data management and laboratory management software is now available and supported in New Zealand

**Keynetix Ltd** are delighted to announce the appointment of Enzdata as Agent for HoleBASE, KeyHOLE and KeyLAB in New Zealand and together we will be supporting the new AGS 4 New Zealand format.

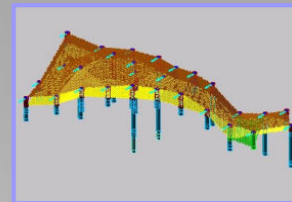
### HoleBASE

HoleBASE is a comprehensive data management and borehole logging software package for geotechnical and geo-environmental site investigations.



### KeyHOLE

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## ***Do We Want A Paperless Laboratory?***

***By Roger Chandler***

Whenever a company looks to improve the efficiency of their field work and laboratory testing, the subject of a paperless laboratory is never far away. Previously the idea has been dismissed or parked as a result of either technology requirements or the practical problems of tracking a sample around the laboratory without the usual paper trail.

The introduction of AGS data into New Zealand was covered in the last issue of CENTANZ NewZ and this format will result in an increasing number of requests for laboratories to be reporting their tests in AGS format.

However according to Dr Roger Chandler, member of the AGS data management committee in the UK and Managing Director of Keynetix; a leading supplier of Geotechnical Laboratory Management Systems, an increased number of AGS data requests often cause laboratories to review their data management policies and processes.

The key to efficient laboratory data management is to avoid re-entering any data. This includes sample data, scheduling information or test results. When a laboratory relies on a pen and paper approach it is quite common to see systems that require some data to be re-entered 3 or 4 times during the life of the sample. When you add each of these stages up, the data re-entry bill is quite considerable even for a small laboratory.

KeyLAB version 2.1 was launched last month with features that have been added specifically for customers in New Zealand and Australia. The laboratory Information Management System has a strong following in the UK where its creators; Keynetix heavily promote the two golden rules for data entry – 1) only do it once and 2) get someone else to do it (use AGS for import as well as export).

Dr Roger Chandler, Managing Director of Keynetix visited New Zealand in August 2011 and met with several laboratory managers to determine what modifications would be needed to KeyLAB to meet the requirements of the New Zealand industry. As a result of these meetings and subsequent purchases by Australian and New Zealand Laboratories; Keynetix have implemented 18 major improvements to KeyLAB 2.1, most of which are aimed at assisting laboratories in New Zealand or laboratories wishing to reduce data re-entry even further.

“Because of the flexible way KeyLAB allows you to implement your existing spreadsheet solutions we have seen a large number of our customer base already reaching the point where they only write the data once and type it once. These customers are now pushing ahead for the final efficiency gain and removing the writing elements of their process.”

Interestingly when you analyse the paper and pen stage it will become clear that the problem is caused by the pen and not the paper. It is the writing of data that causes the re-keying of data not the reading of it. To head for a truly paperless laboratory is a difficult and considerably more expensive goal and has a number of complications associated with simple operations like determining what tests a tray of prepared soil is waiting for (usually what the paper on top of it says!) and what test the tins in the oven are for (again with paper a simple case of referring to a written record).

So in order to make your laboratory truly efficient, don't go paperless, go penless!

CETANZ organisations are welcome to contact Keynetix to learn more from their experiences in helping laboratories increase their data management efficiency and the hurdles that need to be overcome. For more information contact Roger Chandler on [roger.chandler@keynetix.com](mailto:roger.chandler@keynetix.com) or Kent Langdon, Keynetix's New Zealand representative at [ANZsupport@keynetix.com](mailto:ANZsupport@keynetix.com) or visit [www.keynetix.com/keylab](http://www.keynetix.com/keylab)

***Places I've Been And Where I'm Going Soon***

I've have been in many places, but I've never been in Cahoots. Apparently, you can't go alone. You have to be in Cahoots with someone.

I've also never been in Cognito. I hear no one recognizes you there.

I have, however, been in Sane. They don't have an airport; you have to be driven there. I have made several trips there, thanks to my friends, family and work. I live close so it's a short drive.

I would like to go to Conclusions, but you have to jump, and I'm not too much on physical activity anymore.

I have also been in Doubt. That is a sad place to go, and I try not to visit there too often.

I've been in Flexible, but only when it was very important to stand firm.

Sometimes I'm in Capable, and I go there more often as I'm getting older.

One of my favorite places to be is in Suspense! It really gets the adrenalin flowing and pumps up the old heart! At my age I need all the stimuli I can get!

And, sometimes I think I am in Vincible but life shows me I am not.

People keep telling me I'm in Denial but I'm positive I've never been there before!

I have been in Deepshit many times; the older I get, the easier it is to get there. I actually kind of enjoy it there.

## Current News

InfraTrain will be coordinating a major review of all of its qualifications over the next five years, beginning in quarter 2, April, 2012.

This will form part of a wider Targeted Review of Qualifications (TRoQ) by the New Zealand Qualifications Authority, which will examine almost 1,800 qualifications at Levels 1 to 6 across 26 industry sectors.. At this stage there are 34 provider and ITO qualifications that will be considered as part of the review.

The review will be carried out in consultation with key Tertiary Education Organisations (TEO's), Private Training Providers (PTE's), industry associations, and interested industry stakeholders.

### Objectives of the review

1. Reduce the duplication of qualifications in the Infrastructure Works sector. To establish a clearer suite of qualifications on the New Zealand
2. Qualifications Framework, which meets the needs of the industry, employers, trainees and students.

### How will this affect current qualifications?

The current qualifications are still the benchmark for knowledge and skills for the industry. If you are an employer or a trainee, you will be getting the very best in training by completing the current qualifications which will remain valid

InfraTrain do not envisage any changes to our national certificates unless dictated by our industry. So business as usual, keep enrolling your staff and supporting your industry qualification and employees learning

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Daily SuDoku: Tue 20-Mar-2012

medium

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Calibration Centre



## New Calibration Services

In addition to our existing suite of services, we have recently gained IANZ accreditation for:

- Compression machines
- Tension machines
- Balances
- Load cells
- Proving rings



## Civil Testing Equipment

Nuclear Density Meters, Shear Vanes, Impact Testers, Concrete Airmeters, Schmidt Hammers, Measuring Wheels, Scala Penetrometers, Skid Resistance Testers and more...

## Metrology and Lab Testing Equipment

Dial Gauges, Calipers, Liquid Limit Devices, Length Bars, Micrometers, Rubber Hardness Testing (ShoreA, IRHD), Measuring Tapes, Steel Rules, Weight Gauges, Engineers Squares, Spirit Levels, Dumpy Levels, Bevel Protractors, Inclinoimeters (Bevel), Graticules, Paint Gauges, Gauge Blocks, Thread Gauges, Surface Texture, Surface Plate and more...

## MCC - The Measurement and Calibration Centre

For more information call us on: Ph: (09) 362-1720 or visit our website [www.themcc.co.nz](http://www.themcc.co.nz)  
19 Morgan Street, Newmarket, Auckland, New Zealand

## ***Men Burnt After Striking Cable***

### ***By Debbie Porteous—Otago Daily Times***

Two men were taken to hospital after they were burnt when a probe they were using struck an underground high-voltage power cable in Dunedin yesterday.

The men were using a penetrometer to test soil density in Great King St, in front of the Willowbank Quarter, when it struck a 6600-volt cable buried about 60cm below ground at 10.12am.

The pair were working for Wellington geotechnical drilling company Griffiths Drilling.

Delta's general manager of asset management, Adam Fletcher, said the sharp point of the penetrometer pierced the high-voltage cable, causing an earthing of the cable and an electric arc flash.

Another man who was working in the area at the time said he and his colleagues went outside after they heard a "heck of a bang" to find "quite a bit" of smoke in the area.

He said one man had burns on his legs and up his front and his hair was singed.

A St John spokeswoman said the more seriously injured of the men received burns to about 10% of his body, mainly on his arms and legs.

The second man received moderate burns to his arms and legs.

They were taken to Dunedin Hospital for treatment.

Thirty-nine Delta customers were without power for 32 minutes while the company took the damaged cable out of service and arranged alternative supplies.

Griffiths Drilling managing director Mel Griffiths did not return calls yesterday.

Mr Fletcher said Delta's advice to anyone planning to dig or probe into the ground was to obtain cable-location plans before they started.

"They are available free of charge. A full onsite cable location service is also available. Please call 0800 4DELTA before digging."

There were live-wire warning signs in the area.

A Department of Labour spokeswoman said it had started making inquiries about the incident.