FOUNDATION™ Fieldbus End Users Council Australia

Newsletter **Issue No 21- March 2005**

FROM THE CHAIR

Hello Fellow FFEUC-Aus members, this is the first newsletter since September and there are some very good reasons behind this, the main reason was that our database had got into a bit of a state and thus needed a complete update. Thankyou to all that returned the tracker email, we are in a much better position now with a "clean" database which has eliminated returns etc. Thus much of my time has been spent on getting the entry done, this is complete now for the WA and Eastern states and we are moving forward again. I still have to complete the overseas members section.

So what is happening, well lots really- we have purchased a couple of scopes for the training kits (thanks to Fluke Australia for the special pricing) and are now ready to go with the training. Talking of training Allen Tighe has worked very hard getting the kits together and also formulating the new "Configuration" course. See the details about this later in this newsletter.

The FFEUC-Aus Eastern States subcommittee is being formed and have had their first meeting, so hopefully we will be seeing a dynamic community growing over East soon.

The new committee is in place and we thank all that have put their hands up in this regard.

On the FF front there is a huge amount of interest now taking place worldwide with new projects happening on a regular basis.

We are busy planning the next "jump aboard event' which will be happening next September, this year it will have the theme "Get Smart-Implementing fieldbus". OK 99 let's get on with it ☺ . The subcommittee is in place and two meetings have been held to date.

Lim has been to Vienna Austria representing me in my position on the Foundation fieldbus End User Advisory Council. He attended the general assembly as well so I am sure that he will have much to report on during our meeting next month.

Following is my Chair report for last year, I thank you all again for the ongoing support that has been given to me over the years.

Jim Russell

Chair Foundation fieldbus End User Council Australia- Inc

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Report from the Chair 2003-2004

FFEUC-AUS INC CHAIRMAN'S REPORT – 2003-2004

The FFEUC-Aus Inc has had another very successful, productive year and is in a sound financial position. This is owing to the sterling work of a very hard working and dedicated committee. I am privileged to have a team such as this to work on meeting our tasks and targets.

The sad aspect to the year was the tragic loss of a wonderful committee member Paul Davies. Paul was a very active member from the inception of the FFEUC-Aus and always was there in the background happily taking on any tasks that he was given. He has been really missed by us all.

I would like to thank all the committee members who have contributed their time and effort to the FFEUC and in particular the following;

- Tiong Lim our secretary who always has a smile for us all when the pressure is on. Lim has been a 'rock' that we have all leaned on for support.
- Allen Tighe who has taken on the training portfolio along with the Chairing of the Jump Aboard 2004 subcommittee- a great job Allen.
- Duncan Turner, our treasurer who has undertaken that task along with the role of reviewing the JA2004 papers- A sterling effort.
- David Edge is another member who picks up any job- thanks David.
- Kevin Barnes, our "Mr Happy" gives us valued contribution all the time, again taking on lots of tasks for us.
- We would also like to thank the representatives from Honeywell, Krone and Emerson who have also attended our meetings and contributed to the FFEUC.

ACTIVITIES

TECHNICAL MEETINGS
The technical meetings schedule for the past year has been minimal, mainly because of the amount of effort on other activities. Our aim is to resurrect these meetings over the next year with an initial focus being on the new FF Engineering Guide.

TRAINING
A major focus has been on the provision of training kits to provide "hands on" training at a basic configuration level. We have utilized donated equipment from PR Electronics, MTL, SMAR, and Relcom for these kits. Additionally we purchased SMAR host equipment and some second-hand laptops to provide three kits. Allen Tighe has worked tirelessly to build the kits and prepare a course. These kits are really small and portable and utilize a temperature control loop. This training is planned to be available by the end of the year. I thank Allen for all his work and the companies who have donated equipment.

CENTRE OF EXCELLENCE
Unfortunately there has been a turnover of staff at CCI which resulted in the CoE label being removed from the CCI Training Centre. We are still keen that the apprentices are subjected to FF training and exposure and have had several visits with the focal points in the organization. The FF loops have fallen into disrepair and need work to re-commission them. We have offered our help in this regard and will await CCI requests in this regard.

We are continuously exploring other options and have had discussions with the Australian Oil and Gas Industry Training Centre which is a new facility being built in Henderson.

JUMP ABOARD
Jump Aboard 2004 is promising to be the best ever, thanks to sterling work by the subcommittee comprising Allen Tighe, Tiong.Lim, Duncan Turner, Kevin Barnes, David Edge and of course our Canadian connection Ian Verhappen. Thanks again to all for the tremendous job that they have all done. Also I must thank our Gold Sponsor Honeywell (Harvey Rough/ Brian van Bueren) for all their help. Additionally our silver sponsors of MTL, P&F and Yokogawa must be thanked for their support.
I would like to stress that it is all this voluntary effort in the "FF Engine Room" which provides the FFEUC-Aus Inc with its financial resources necessary to run the organization. Every cent earned from the Jump Aboard events is ploughed back into FF education, promotion and in effect to you, our members, with heavily subsidized seminars.

WEBSITE
We have developed a new website, again with great work from Allen Tighe. The address is www.fieldbus.org.au . This site is linked to the International FF site www.fieldbus.org

NEWSLETTER
We have been producing regular newsletters which have been well received.

PUBLICITY
Several articles have appeared in PACE and Hydrocarbon Asia.

EASTERN STATES
This is still an area of concern, in that we cannot seem to get things up and going in the Eastern States. We need to find committed individuals in those areas and fund subcommittees to get things going. Finding these "champions" is really hard.

FFEUAC

Tiong Lim attended the last FFEUAC meeting on my behalf in February. We were very active in assisting with the development of the Engineering Guide and thank Allen Tighe and Ambrose Hargen for their help in this regard. Also thanks to Duncan Turner for his work on Fieldbus documentation standards and Lim for the input into the EDDL development team.

PLANNING FOR 2004-2005

TRAINING- Hands On configuration to be in place by the end of the year with the Fieldbus Intermediate Design & Configuration course (HSE / OPC / HMI) being prepared for Q3 next year.

WEBSITE – Further develop the website into a very useful FF resource.

TECHNICAL MEETINGS – Have 4 technical meetings at a minimum.

EASTERN STATES- To develop an EUC subcommittee in Victoria.

JUMP ABOARD 2005- Sponsorship opportunities are being snapped up already for JA05, with both Honeywell & Weidmuller planning a huge event-more to come & more sponsorship opportunities available.

Note from the chair: After two years of disappointing numbers in the Eastern States it is unlikely that we will contemplate a seminar there in 2005. In an effort to **"freshen up"** the concept a brainstorm session will be conducted. We may consider a Saturday seminar in Perth to try to capture those **elusive** contractors!
Jim Russell
Chair FFEUC-Aus Inc
23.9.04

Treasurers Report 2003-2004

The financial year of 1st July 2003 to 30th June 2004 was the 4th year of the FFEUC Australia Incorporated.

We received donations from attendees at technical presentations through out the year culminating in our International Seminar Jumpaboard 2003 including Foundation Fieldbus Training Courses held throughout the year.

In an effort to reduce Accounting fees the FFEUC Australia Incorporated has appointed a new Accountant - Mr Kenneth M Godwin - Chartered Accountant of 14 Kestrel Street Karrinyup, W.A.

The FFEUC Australia Incorporated account records for 2003/2004 will be reviewed and a financial report produced by our new Accountant and this will be issued post the 2003/4 AGM .

The main points of interest for the account are as follow: -
Opening account balance 1st July 2003 $12,161.22
Closing account balance 30th June 2004 $18,781.79

The account was made up of a number of payments and donations from technical seminars throughout the year. Please refer to the attached summary.

I see that I wrote on the cheque butt " Flowers - Dave Curtis's funeral" back in January 2002. Unfortunately, I see again November 2003 "Flowers – Paul Davies funeral". Paul was another tireless committee member who is sadly missed along with Dave.

Please note that the above financial information has not been reviewed by our Accountant and is brief summary of the main debits and credits at this time. When the detailed accounts have been reviewed they will be made available on the web site for members to view.

Duncan Turner
National Treasurer FFEUC Australia Incorporated.

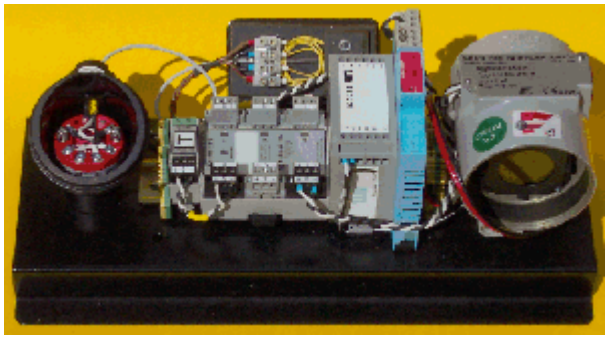
FOUNDATION™ Fieldbus Training in Australia

The SAIT essentials 1 day training is still available, please contact Allen Tighe for further details.

NEW!
The *Configuration* training course is aimed at personnel who have completed the "Essentials" course or some equivalent pre-requisite basic course in Foundation Fieldbus (FF). Personnel who need to attend are staff who would have any technical involvement with the Engineering and / or Maintenance of a FF installation.
Included with the course is a full-colour comprehensive instruction manual, but it is suggested that attendees bring their previous course manual as a basic FF reference.
The one-day workshop covers many practical aspects of a Fieldbus installation, including four hands-on sessions with a PC workstation, a typical FF certified Host & process control instrumentation.

The course practicial content contains sections on : -

- **Constructing a typical FF H1 segment**
- **Network setup and instrument checkout**
- **PID loop build & schedule downloading**
- **H1 packet analysis via a software package**



The training is certified by the FF End User Council Aus Inc and was created by the Council in response to end user requests for a hands-on experience. This *Configuration* training is a pre-requisite to the higher level of *HSE/OPC Integration* training which is also planned by the FF-EUC Aus Inc. Instructors are certified by both the Foundation and the FF-EUC Aus Inc to present the training courses.
For Course Registration or more details on custom onsite courses
call Allen on (041) 295-5656 or (08) 9243-0161
email: training@fieldbus.org.au
www.fieldbus.org.au
Editors Note: The Best I have been to yet.

LATEST INFORMATION VIA THE FFEUC-AUS WEBSITE

For the latest information on all FFEUC-Aus Inc activities and some great Foundation fieldbus technical data please visit our website http://www.fieldbus.org.au

Did you know that **Fieldbus Forums** is a new online community for the exchange of fieldbus information?

This interface lets FOUNDATION fieldbus technology experts, end users, product suppliers, and others around the world interact in an open, web-based community—and it's available to members and non-members. **Fieldbus Forums** makes it easy for those with an interest in fieldbus to find answers to their questions about the technology, and learn from the experiences of their counterparts across the globe.

Click here to register for **Fieldbus Forums**. It's free!

End user corner: Post your story

Fieldbus Foundation's new "End User Corner" forum is filling up with success stories—proof of the market's growing interest in, and demand for, FOUNDATION fieldbus. This forum presents the knowledge of experienced fieldbus end users and provides a way to share the solutions only FOUNDATION technology delivers.

Click here to post your own fieldbus installation success story.

If you are not registered for Fieldbus Forums, click here to sign up.

Editors Note: Failures are also a great teacher, own up, let us know how easy it is to make mistakes!

Loads of Free Fieldbus papers and Information

ICEweb has a huge amount of FF and other fieldbus technical papers on its Fieldbus page, see http://www.iceweb.com.au/Instrument/fieldbus.htm

MTL-Relcom introduces intrinsically safe fieldbus barrier
MTL-Relcom has introduced a range of intrinsically safe fieldbus barriers, adding to its extensive portfolio of fieldbus power supplies and wiring components. Together with MTL-Relcom's FISCO power supplies, the new units allow MTL to provide the best technical solution and lowest cost for every IS fieldbus application.

ABB wins gas platform project

ABB has been awarded a project worth over $4.7 million to provide the entire automation and instrumentation suite for Petro-Canada's De Ruyter oil and gas production platform.

De Ruyter production platform is to be built in the North Sea some 60 km offshore from The Hague. ABB will deliver the automation and instrumentation systems in August 2005; the platform is scheduled to come on-stream in mid 2006.

The installation is based on the 800xA extended automation system and includes a control and safety system based on the ABB AC800M and AC800HI safety controllers (SIS), FOUNDATION fieldbus for process control, and HART for other control and safety I/O.

Emerson to automate Australian mine

Emerson Process Management has won a $3.1 million contract for the digital automation and control of minerals processing at the BHP Billiton nickel/cobalt mine and treatment facility under construction in Ravensthorpe, Australia. The new open-pit mine and minerals processing plant is part of a $1.1 billion project that will annually produce up to 50,000 tons of nickel and 1,400 tons of cobalt.

Emerson will install its PlantWeb® digital architecture with FOUNDATION fieldbus technology to deliver significantly more process and equipment information than traditional analog systems. The system will let BHP Billiton operate a safer, more reliable, and better performing mine and plant.

The DeltaV™ digital automation system with AMS™ Suite predictive maintenance software, key components of PlantWeb, are at the core of the innovative digital approach that will include more than 2,000 smart digital field devices. Emerson reports that the project is the largest FOUNDATION fieldbus installation in Australia, and the largest for mineral processing in the world.

Fieldbus Foundation releases Ethernet interoperability test kit

Control Engineering February 8, 2005

Austin, TX-To allow interoperability testing of function blocks in high-speed Ethernet (HSE) devices, the Fieldbus Foundation (FF) has released its new HSE Interoperability Test Kit (HSE ITK), Version 1.0. The test kit provides test cases that expand the scope of interoperability testing, benefiting end-users of FOUNDATION fieldbus devices.

HSE ITK supplements FF's previously released conformance test tool for HSE linking devices. Its toolset opens the door for registration of FOUNDATION fieldbus HSE device designs with function blocks. Also an excellent tool for troubleshooting and debugging HSE devices, the test kit includes all hardware and software required to ensure complete HSE device interoperability as specified by the foundation¹s official registration testing procedure.

HSE ITK was designed to verify a unique aspect of FOUNDATION fieldbus that makes device interoperability possible-standard function blocks. FF says its testing tool represents the most rigorous and unique device interoperability test

system available in the control industry. HSE ITK consists of a test engine and a test function block. HSE ITK test engine executes more than 400 test cases that exercise the device implementation.

The test kit also includes a Device Description (DD) viewer that allows examination and verification of a device's DD. Upgrades to the HSE ITK will occur as new standard function blocks become available.

HSE ITK is the newest addition to the tool suite offered by the foundation. Other HSE testing tools include the HSE Analyzer Tool Kit (HAT) and the HSE Conformance Test kit (HCTK), both excellent tools that aid in developing and testing HSE field devices and linking devices. The ITK Automation Tool Kit is an optional tool available to automate interoperability testing and reduce manual intervention.

Denise Garvey, FF's software specialist, adds that HSE ITK 1.0 demonstrates the foundation's ongoing commitment to simplify the design and interoperability of high-speed, multi-vendor fieldbus systems. "We've listened to end-users and responded with additional testing solutions that add certainty to the interoperability of registered FOUNDATION fieldbus devices," she says. "The HSE ITK testing tool enables developers and users to have the highest level of confidence that best-in-class fieldbus devices can be chosen for specific control applications. FOUNDATION fieldbus products are fully interoperable and deliver all of the benefits of the technology."

FOUNDATION fieldbus users are presently specifying HSE devices and their assurance of interoperability to complete plant-wide integrations. End-users and developers worldwide reportedly give FOUNDATION fieldbus device designs high marks for complete specifications and rigorous registration testing. All devices tested and registered by the Fieldbus Foundation receive the official FOUNDATION fieldbus "check mark" insignia.

HSE Interoperability Test Kit (AT-422) is available in addition to the Interoperability Test Kit Bundle (AT-448), which is the new, combined testing kit that includes both the H1 ITK and the HSE ITK (AT-420+AT422). For more information, visit http://www.fieldbus.org/ProductsAndServices/FFProductCatalog/.

StoneL issues fieldbus wiring practices poster

StoneL has compiled a new wall poster that illustrates FOUNDATION fieldbus H1 wiring practices using explosion proof, nonincendive, and intrinsically safe protection concepts. NEC 500 code practices are illustrated, along with a broad array of StoneL wiring components and field instruments for assembling a complete FF H1 network in division 1 and 2 hazardous environments.

At-a-glance wall poster is an excellent reference tool when designing a FOUNDATION fieldbus H1 network.

To receive your free copy, e-mail sales@stonel.com. Request the FF poster and include your address.

2004: It was a very good year!

The FOUNDATION fieldbus installation base grew phenomenally in 2004. Many industry areas and sectors are showing double-digit gains. New business sectors have been added as membership expands; new end users and developers have realized the impact and value of FOUNDATION fieldbus.

New installation references added to the Fieldbus Foundation Web site show its worldwide acceptance and growth. Efforts over the year have continued to drive the FOUNDATION fieldbus specification in many new and Brownfield projects around the globe. Device testing and registration also kept pace—reflecting the value of the market for this innovative technology.

Industry leaders indicate that the FOUNDATION fieldbus market reach will stay on track throughout 2005 and for the foreseeable future.

User's corner: News about predictive maintenance

Shell Deer Park Refinery—Cat Cracker Site: Several fieldbus transmitters began issuing communication failure diagnostics. An investigation uncovered an error in installation methods had left loose conduit plugs on the transmitters, allowing thermo cycling to introduce water vapor into the transmitters. The diagnostics found the problem before failed transmitters could impact the operation, eliminating potential loss (and cost) of product. Estimated savings range is from $3-$50M.

Pepperl+Fuchs guide helps troubleshoot Fieldbus installations

Pepperl+Fuchs' new FOUNDATION fieldbus (FF) *Troubleshooting Guide* is a fully illustrated, comprehensive document for use by engineers troubleshooting fieldbus installations. Publication includes an FF segment checklist plus helpful information on the FF communication signal, measurements on an FF segment, shielding and grounding, and troubleshooting. Diagrams show actual test topologies and measurements.

For more information or to request a copy of the guide, contact: Pepperl+Fuchs, 1600 Enterprise Parkway, Twinsburg, OH 44087; (330) 486-0002; fax: (330) 425-4607. Email sales@us.pepperl-fuchs.com.

What is a SpurGuard™?

The best selling range of MTL-Relcom Megablock wiring hubs are fitted with SpurGuards™ to enable high availability and high reliability in fieldbus installations. But just what is a SpurGuard™?

SpurGuards™ are electronic circuits that limit the amount of current that a Fieldbus device can draw from the trunk. Without them, a single short circuit anywhere on the Fieldbus segment will cause all devices to lose power. In this case, one of the key benefits of Fieldbus—reduced wiring due to parallel connections—is also the reason SpurGuards™ were developed. SpurGuards™ improve system availability by eliminating a single point of failure (short circuit on a spur). Note that the Trunk cable connecting the host to the field connection block cannot be electronically protected from shorts.

Because SpurGuards™ are current limiters, they also prevent a failing device from exceeding the current limit of the SpurGuard™. In addition, SpurGuards™ offer benefits in hazardous areas. For Class I Zone 2 (or Div 2) areas, they limit energy to a level that allows the spurs on the connection block to be worked on while the system is live, and without having to get a gas permit.

DID YOU KNOW...the Foundation's Technical Documents are available online? Click here to view or download.

There are now 267 registered products, just click on the link to see them all

Search our Registered Products.

TIPS FROM THE GURU:

1. The mode of the Resource Block controls the mode of all other blocks in the device, - none of the other blocks can go to "auto" till the RB is running.
2. One & only one device in a network can be the LAS at any one time. Therefore at least one LM (or bridge) class device is needed in a link. LM devices try to acquire the LAS role when no LAS exists on start up or when the current LAS fails. (The LM device with the lowest node address becomes the new LAS for the network).
3. A backup Link Active scheduler (LAS) shall be configured for all control loops and should normally reside in the device with the minimal processing load.

Ask the Guru- For more tips, visit : website http://www.fieldbus.org.au "Ask the Guru"

Or direct to: guru@fieldbus.org.au.

Have you upgraded your PC and have licenced copies of WIN 2K just stuck in the cupboard?

A donation of this software would be much appreciated; we require 3-5 copies for our training kits. Any Companies or individuals who could help with this please contact Allen on (08) 9243 0161 or via email.

Whilst every effort is made to ensure technical accuracy of the information in this newsletter, the Fieldbus Foundation End Users Council Australia accepts no liability for any loss or damage caused by error or omission from the data supplied. Users should make and rely on their own independent inquiries. By accessing the newsletter users accept this condition.

Should you note any error/omission or an article offends please do not ignore it, contact the secretary jim@fieldbus.org.au and we will review, rectify and remove as necessary.

Finally should you wish to be removed from the mailing list, please send an email to jim@fieldbus.org.au with the subject header "PLEASE REMOVE FROM FFEUC EMAIL"