



## FROM THE EDITOR

Dear Reader, welcome to the 27th edition of the FFEUC Aust newsletter.

For my first swing as editor, I would like to thank Kelvin Oakes for his editorial input in to the last few editions of our newsletter. The short, punchy and informative format works well at getting information out there. So, do not expect any sweeping changes during my tenure as Editor. "If it ain't broke, don't try to fix it", that's always been my policy. Strike one...

Secondly, there is a lot of information in this edition so please take your time and check out as many links as you can. What else do you have to do during your lunchbreak!? Strike two...

And finally, as Mr Plunkett put it, "Progress is like a wheelbarrow. If you don't keep pushing it, it stops".. So Ladies and Gentlemen, roll up your sleeves and grab on to those handles.. Strike three...

Read on and enjoy.

Editor : Gordon Stevenson  
Email: [ghsteven@bechtel.com](mailto:ghsteven@bechtel.com)

## FROM THE CHAIR

Hi All, Well we are already a third through the year and our Jump aboard 2007 seminar is just a memory. The event was highly successful with around 180 delegates across the Melbourne and Perth seminars. From the comments received the delegates were most impressed with the organisation, quality of speakers and venues. Of course without the sponsors ABB (gold), Emerson Process Management, Geographe Energy, HIMA, MTL and the table top companies the event would not have happened. We again thank you all for your support. Personally I must thank the organising committee for all their efforts, it is due to them that we had such success. The work still goes on to close out the event such as recording the lessons learnt, updating our database and also following up on payments still due.

As I was not available Duncan Turner went off to Houston back in February to represent us on the Foundation Fieldbus End User Advisory Council. As some of you are aware I have been the Oceania representative on the FFEUAC since its formation and as a result have been actively pursuing our committee members to take over from me as part of my succession plan. I am pleased to advise that Duncan has agreed to take on this important role. The FFEUAC gives you the opportunity to raise any Foundation Fieldbus issues that you have with the technical "gurus".

Now that the committee has generally recovered after JA07 it is time to begin organising the next calendar events, we are planning to have a further three this year in Perth and in Melbourne.

I was particularly pleased to hear from Bill Tatum (Marketing Manager Fieldbus Foundation) on the advances that FF is making in the areas of Safety Instrumented Systems, Electronic Device Description (EDDL) cooperation and new transducer blocks. Also the foundation has kicked off the next phase of the development with a "wireless concept" study.



Another reflection of the growth and acceptance of the technology is the number of end users now on our committee, after all the early adopters it is good to see large installations happening with so much positive feedback.

Jim Russell  
Chair FFEUC-Aus Inc  
Phone (08) 93970249 Mobile: 040 946 6674  
Email: [jim@fieldbus.org.au](mailto:jim@fieldbus.org.au)

## Your Committee Members

Need to contact us? Follow the link for the latest EUC contacts page: -  
<http://www.fieldbus.org.au/contacts/EUCAcmte.htm>

Are you a Fieldbus End user? Have you implemented FF solutions? Would you like to join the committee and assist others in achieving the kind of success that you have realised? With as little as 1 hour every two months, you could be of great assistance in driving Australian process plants into the digital world. If so, we would like to hear from you. Please click the above link and e-mail any of the current committee members.

## Foundation Fieldbus Training

The Foundation Fieldbus (FF) End User Council Aus Inc in conjunction with the Southern Alberta Institute of Technology (SAIT) is offering FF Training courses in 2007 in Australia. Dates are as follows:

<b>Perth</b>	Wednesday	04 / Jul / 07
<b>Melbourne</b>	Tuesday	17 / Jul / 07
<b>Perth</b>	Wednesday	07 / Nov / 07
<b>Melbourne</b>	Tuesday	09 / Oct / 07

**Courses normally run from 09:00 to 16:30 - lunch and break refreshments are included with the course fee.**

For more information please follow this link – <http://www.fieldbus.org.au/training/EUCtrain.htm>

The FFEUC recommends that attendees complete the above **Essentials** theory course prior to the **Configuration** practical course which is also available through the FFEUC.

These courses together with the instructors are fully certified by SAIT and the Fieldbus Foundation in Austin. For more information please contact Allen Tighe on **(08) 6262-9365** (please note - seats are limited).

## Foundation Fieldbus good news stories

The following white paper recounts the experience of Brunner Mond, a major producer of sodium carbonate (soda ash) for the European Market, in replacing the outdated control system at its Northwich East plant in Cheshire, England with FOUNDATION technology. Brunner Mond sought a modern control system to improve its operational efficiency, reduce plant maintenance costs, increase safety, and minimize unplanned shutdowns due to equipment failure.

[http://www.fieldbus.org/images/stories/enduserresources/technicalreferences/documents/fieldbus\\_brunnermond\\_whitepaper.pdf](http://www.fieldbus.org/images/stories/enduserresources/technicalreferences/documents/fieldbus_brunnermond_whitepaper.pdf)



... dedicated to a single international fieldbus

The latest Fieldbus Report includes the following, this is a large download so if you are only on dial up do not bother! [http://www.fieldbus.org/images/stories/newsroom/fieldbusreport/fieldbus\\_report\\_spring07\\_final.pdf](http://www.fieldbus.org/images/stories/newsroom/fieldbusreport/fieldbus_report_spring07_final.pdf)  
Beyond the Bus: Open & Integrated Automation Infrastructure  
Fieldbus Foundation changes the paradigm for process control  
FOUNDATION™ Technology Growth Increases Worldwide  
New market research shows surging adoption of fieldbus solutions  
Installation Costs: Fieldbus vs. Competitive Technologies  
What you need to know before choosing a new control strategy  
Staying Ahead in Today's Emerging Digital World  
Digital technology is here to stay. Are you ready?  
New Developments Advance Physical Layer Diagnostics  
Supplier innovation responds to fieldbus installation requirements  
SIS Project Moves Ahead Thanks to Industry Support  
Suppliers and end users team up to achieve major milestones  
Fieldbus Provides Automation Solution at Memphis Zoo  
Digital instrumentation finds way into non-conventional application  
Duke Energy Undertakes Largest Nuclear Plant Installation  
FOUNDATION technology provides robust, long-term control solution  
Fieldbus Solution Highlights  
Discover the latest FOUNDATION products and services

## Foundation Fieldbus New Applications and Updates

The latest and previous editions of Fieldbus Facts on line can be found at <http://www.controleng.com/index.asp?layout=eNewsletterCTL&newsID=19793&spacedesc=current>

Have you wondered what EDDL is all about? The paper Digital Fieldbus Installations Use EDDL Technology for Simplicity with Advanced, Full Functionality- has the answers- [http://www.emersonprocess.com/home/library/articles/iee/ieecce0412\\_eddl.pdf](http://www.emersonprocess.com/home/library/articles/iee/ieecce0412_eddl.pdf)

During ISA2006 , the Fieldbus Foundation group of members and its contributors announced its support for an ISA committee creating a harmonised version of the International Electrotechnical Commission (IEC) 61804-3 international standard on Electronic Device Description Language (EDDL). The ISA SP104 committee will republish the IEC standard as an American National Standard Institute (ANSI) standard. Additional information is available on the committee's website <http://www.eddl.org> .

EDDL is a text-based language for describing the digital communication characteristics of intelligent devices and equipment parameters in an Operating System (OS) and Human Machine Interface (HMI)- neutral environment. EDDL enables a host system manufacturer to create a single engineering environment that eliminates the need for custom software drivers for each device type.

EDDL enables end users to achieve unsurpassed levels of interoperability and device integration. It provides the freedom to choose "best-in-class" automation products from multiple suppliers, delivers the power to integrate devices to achieve optimum control strategies, and allows easy and efficient system upgrades.

## Foundation Fieldbus Lessons Learnt

Great Foundation Fieldbus User Forums can be found at <http://forums.fieldbus.org> , you will have to register but it is well worth it.

The ISA fieldbus forum is also a good source of information, it can be found here; [http://www.isa.org/scripts/lyris.pl?enter=fieldbus&text\\_mode=&lang=english](http://www.isa.org/scripts/lyris.pl?enter=fieldbus&text_mode=&lang=english)

**Do you have any lessons learnt? The editor would like to hear from you.**



## Foundation Fieldbus Technical Papers

The Fieldbus Foundation provides a variety of technical white papers explaining the design, installation and operation of FOUNDATION-based plant automation systems. These documents were prepared by leading experts on FOUNDATION technology, and include a wealth of valuable information for process industry end users.

### Available white papers include:

- FOUNDATION Technology: Tested. Proven. Available Today.
- NASA Integration of Fieldbus Devices into an Existing DCS
- HSE: An Open High-Speed Solution for Plantwide Automation
- FURIOS: Fieldbus and Remote I/O System Comparison
- ARC Market Study Focuses on FOUNDATION Technology Operational Excellence

Find them all at [http://www.fieldbus.org/index.php?option=com\\_content&task=view&id=150&Itemid=326](http://www.fieldbus.org/index.php?option=com_content&task=view&id=150&Itemid=326)

The following along with a host of additional FF information can be found at <http://www.iceweb.com.au/Instrument/fieldbus.htm>

Foundation Fieldbus Competency - Project Training Recommendations - This article outlines a suggested approach for staff training in any new FOUNDATION™ Fieldbus (FF) project – including both greenfield and brownfield sites - Thanks to Seacove Systems-Australia - <http://www.seacove.biz/REPORT/FFskills.pdf>

Foundation Fieldbus Training in Australia - A Variety of Courses from Seacove Systems  
<http://www.seacove.biz/COURSE/SCStrain.htm>

The Fieldbus Book - a Tutorial - This excellent 41 page tutorial from Yokogawa is well written and covers some material not mentioned by others elsewhere  
<http://www.yokogawa.com/fbs/pdf/fbs-ti38k02a01-01-en-00.pdf>

Introduction to Fieldbus - This technical paper covers how fieldbus works, shows how to connect instruments, and explains why—in most cases—you can't realistically connect all 32 instruments on a single fieldbus segment. It also discusses the differences between PROFIBUS and FOUNDATION fieldbus, FISCO vs. Entity intrinsically-safe fieldbus systems, installing redundant segments, and EDDL vs. FDT - Thanks to MooreHawke Fieldbus.  
[http://www.miinet.com/products/data\\_sheets/fieldbus.pdf](http://www.miinet.com/products/data_sheets/fieldbus.pdf)

What is HART? - A technical paper from MTL Australia  
[http://www.mtl-inst.com/products/hart/datasheets/what\\_is\\_hart.pdf](http://www.mtl-inst.com/products/hart/datasheets/what_is_hart.pdf)

The PlantWeb University has excellent courses on Foundation Fieldbus. You will have to log on but it is worth the effort!  
[http://plantweb.emersonprocess.com/university/engSch\\_Fieldbus\\_XML.asp](http://plantweb.emersonprocess.com/university/engSch_Fieldbus_XML.asp)

HART v Foundation Fieldbus – The Facts and the Real Difference -Jim Russell - Thanks to ICEweb  
The question is often asked “Why should I install Foundation Fieldbus™ when the features are all available with HART?” This White paper addresses this question, provides some of the answers and covers the following;

- The Technologies
  - Differences, Advantages and Disadvantages
  - Why some Manufacturers / Suppliers continue to push HART and put up a “Smokescreen”
  - Brownfield and Greenfield Plants- What technology should be used
  - Simple HART v FF Comparison Chart
- <http://www.iceweb.com.au/Instrument/FieldbusPapers/HART%20v%20FF%20PAPERfinal.pdf>



The Fieldbus Foundation has the following 2007 General Assembly End User Presentations available on its website

- BP keynote Presentation
- Larry O'Brien: Beyond the Bus – The State of Foundation Technology in Today's Marketplace
- Wes Meger: Foundation Fieldbus at Suncor Firebag
- Michael Miller: A Nuclear Perspective On A Foundation Fieldbus Application
- John Rezabek: Tips On How To Be A Good End User
- Robert Rounding: Foundation Fieldbus Made For SCADA

[http://www.fieldbus.org/index.php?option=com\\_content&task=view&id=269&Itemid=259](http://www.fieldbus.org/index.php?option=com_content&task=view&id=269&Itemid=259)

## Foundation Fieldbus New Products and Product News

The Fieldbus Foundation has approved registration for the following SMAR HI302-I HART Interface / Foundation Fieldbus models:

- HI302-I, 8 4-20mA + HART inputs
- HI302-O, 8 4-20mA + HART outputs
- HI302-N, 8 4-20mA + HART inputs

Emerson Process Management has introduced Electronic Device Description Language (EDDL) enhancements into its motor-pump monitoring technology, the CSI 9210 Machinery Health™ Transmitter.

New from MTL, the F809F Fieldbus Diagnostic Module is a FOUNDATION fieldbus device that communicates with the host control system via a fieldbus segment. It is available as an option for use with F800 Series and some F600 Series fieldbus power supplies and allows the network status and measured parameters to be displayed in the host control system using proprietary instrument management software.

The Yokogawa FieldMate™ Versatile Field Device Management Tool is a new field device management solution operating in a PC/handheld-based environment. FieldMate provides access to parameter configuration for FOUNDATION fieldbus intelligent field devices, regardless of the manufacturer, in addition to legacy field communication protocols such as HART and Profibus. It also enables easy operation for device configuration, diagnostics, and problem resolution, while automatically storing work activity in a traceable field maintenance database.

National Instruments Releases NI-FBUS Software Version 3.2 which includes features such as:

- DDS 5.0.5 Support
- EDDL Features
- OPC DA 3.0
- Add Interface Wizard
- Device Property and
- Customized Image
- .NET Library
- Device Live List
- NI License Manager

NI-FBUS Communications Manager and Configurator are included.

The software is free for download; no license activation is required for offline mode.

National Instruments • <http://www.ni.com/fieldbus>

Pepperl+Fuchs have introduced the Mobile Advanced Diagnostic Module — a comprehensive physical layer diagnostic tool for FOUNDATION fieldbus H1 and Profibus PA installations. This mobile diagnostic tool provides exact segment and individual device data for analysis of the fieldbus physical layer. Intermittent segment malfunctions can be traced without the need for a permanent connection. Passive input circuits and an external power supply leave the physical layer untouched.



... dedicated to a single international fieldbus

Smart have introduced a new series of remote I/O and controllers all connected to High Speed Ethernet (HSE). Unique to SYSTEM302 are the network connections of your choice (FOUNDATION fieldbus, Profibus, DeviceNet, and AS-i). All HSE-RIO can access conventional signals from a variety of discrete and analog I/O cards, also having a Modbus connection for legacy equipment integration. Other capabilities include Function

Emerson Process Management has released Revision 23 DD for their 3051S Foundation Fieldbus Transmitter. Revision 23 includes:

- New Function Blocks – Mass Flow, Output Splitter and Control Selector
- New Functionality - Live Software Download and Memory write metering
- Improved Functionality - ITK 5.0
- Improved Functionality - Faster Diagnostic Block and Easier diagnostic data publishing

Beamax have released their MC5 Fieldbus Calibrator. The MC5 is a multifunction calibrator and fieldbus configurator which can be used for calibrating Foundation Fieldbus H1 transmitters. Check out <http://www.ams-ic.com.au/documents/Newsletter-Nov2006.pdf> for more details.

Honeywell have released an enhanced version of its Field Device Manager. Field Device Manager R301 supports both the latest EDDL and Field Device Tool (FDT) with Device Type Manager (DTM) technologies. R301 eliminates the need for conversion tools and add-on devices and addresses interoperability issues within open system architectures. [http://hpsweb.honeywell.com/Cultures/en-US/NewsEvents/NewsRoom/PressReleases/TechnologyUpdates/FDMOpenSupport\\_PR\\_022607.htm](http://hpsweb.honeywell.com/Cultures/en-US/NewsEvents/NewsRoom/PressReleases/TechnologyUpdates/FDMOpenSupport_PR_022607.htm)

Pepperl+Fuchs have introduced a simplex, galvanically isolated Foundation Fieldbus Power Supply - KLD2-FBPS-1.25.360. The compact design and use of passive power conditioning makes it highly reliable for single segment power needs.

[http://www.pepperl-fuchs.com/selector/gui/show\\_product\\_detail.kly?selected\\_prod\\_id=30309&lang=ENG](http://www.pepperl-fuchs.com/selector/gui/show_product_detail.kly?selected_prod_id=30309&lang=ENG)

Pepperl+Fuchs have introduced a range of Foundation Fieldbus I/O modules. These units combine the advantages of a FF-Gateway with their proven Remote I/O hardware. Their range has been developed to address the missing link between conventional digital and analogue signals and the most modern Foundation Fieldbus technology and offers a total concept starting with dedicated valve interfaces or temperature multiple inputs to a modular FF Remote I/O. [http://www.pepperl-fuchs.com/pa/default\\_e.html](http://www.pepperl-fuchs.com/pa/default_e.html)

## General Foundation Fieldbus News

Block Programming and Ladder Logic via FFB (Flexible Function Block) and EDDL.

The following podcast provides valuable information for those considering their first, or next, fieldbus project.

"Real-life Accounts of FOUNDATION Fieldbus Installations." A group of end users share their experiences implementing the FOUNDATION integrated architecture in their plants:

- Mike Miller and Ray Price, Duke Energy, discuss fieldbus upgrades to the most heavily operated nuclear power plants in the United States
- Herman Storey, Shell Global Solutions, reflects upon SGS' long history as an early implementer of the technology
- John Rezabek, ISP Chemicals, details the practical benefits for day-to-day operation

<http://www.fieldbus.org/podcast>



## FFEUC-Aus Event Calender

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>

Look under Technical notes, review previous papers since 2001, discussion topics and links to IEAust, ICEweb & ICEpros, the IICA, ISA & the FF-EUC, Check out the new training kits & course time tables. (Training)

## Foundation Fieldbus Technical Engineering Guidelines

The Fieldbus Foundation has the following excellent free downloads available at [http://www.fieldbus.org/index2.php?option=com\\_content&task=view&id=218&Itemid=326](http://www.fieldbus.org/index2.php?option=com_content&task=view&id=218&Itemid=326)

Wiring & Installation Application Guide (31.25 kbit/s Voltage Mode)

31.25 kbit/s Intrinsically Safe Systems

Function Block Capabilities in Hybrid/Batch Applications

System Engineering Guidelines

A huge listing of Foundation Fieldbus technical resources can be found at <http://www.iceweb.com.au/Instrument/fieldbus.htm>

The Fieldbus Wiring Design and Installation Guide - This **updated document from Relcom** which now includes earthing and grounding recommendations provides a readable overview of the Fieldbus physical layer and is a great place to get started with Foundation Fieldbus wiring and installation.

<http://www.relcominc.com/pdf/501-123%20Fieldbus%20Wiring%20Guide.pdf>



**DID YOU KNOW ...** that if you experience difficulties in configuring your registered fieldbus device, you can also visit our Registered Products Page for specific information regarding your device?

<http://www.fieldbus.org/ProductsAndServices/RegisteredProducts>

Download device descriptions – <http://www.fieldbus.org>

Learn fieldbus and Ethernet at your own pace: <http://www.isa.org/fieldbuses>

Learn OPC and automation software at your own pace: <http://www.isa.org/autosoftware>

*PLEASE NOTE: If you know someone, who might be interested in receiving Fieldbus Facts via e-mail, please send them this link:*

<http://www.controleng.com/index.asp?layout=eNewsletterArcCTL&eNewsid=19793&year=2007>



Whilst every effort is made to ensure technical accuracy of the information in this newsletter, the Fieldbus Foundation End Users Council Australia Inc 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- **mailto:** [ghsteven@bechtel.com](mailto:ghsteven@bechtel.com) 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 <mailto:jim@fieldbus.org.au> with the subject header "PLEASE REMOVE FROM FFEUC EMAIL"

