Dedicated Systems' News

Issue # 1
23rd January 2004

VMETRO Announces First VME Renaissance Enabled Bus Analyzer!

Inside this issue:

20th January 2004: VMETRO, the inventors of the first VME-bus analyzer, today proudly introduce the first VME Renaissance ready VMEbus analyzer supporting both legacy VME and the new protocols such as 2eSST and 2eVME. The sixth generation, Vanguard VME Bus Analyzer, is based on the same highly advanced architecture as the other members of the Vanguard family and offers unprecedented levels of power, flexibility and ease of use.

VME is the predominate bus architecture used throughout the aerospace and defence markets. The VME Renaissance initiative provides a significant upgrade to the more than 20 year old VME-bus architecture by specifying new high speed capabilities such as the 2eSST and 2eVME signaling protocols. The Vanguard VME Analyzer aids in debugging the added software and hardware complexity introduced as a result of these new capabilities.

Powerful

- 256 bits x 2M Sample Trace Buffer
- Concurrent use of Analyzer, Statistics, Exerciser, and Protocol Checker modules
- Support for the latest enhancements including VME64, SSBLT, 2eVME and 2eSST

Flexible

- Connect remotely via Ethernet or direct via USB
- Modular architecture provides the ability to reuse the same hardware to test VME, CPCI and/or PCI/PCI-X.

Easy to Use

- Included BusView software allows the user to view captured data in either a transaction summary mode or a more detailed data transfer by data transfer view.

The Vanguard VME Analyzer is available immediately with a 2 to 4 week lead time.

"VMETRO's Vanguard bus analyzer is the only analyzer on the market capable of interpreting 2eSST bus cycles and it is very good at its job," said Dr. Jeffrey M. Harris, Motorola's Director of Research and System Architecture. "I am convinced that it saved us many hours of debug time."

Story ID 1

Wind River's Wind View 4.1 now available

WIND VIEW equips developers with a sophisticated visualization tool to view the dynamic operation of an embedded system. WIND VIEW is key for understanding the complete temporal behavior of your product and tasks, and allows you to fine-tune your shippable product.

WIND VIEW

What's New
Key new features

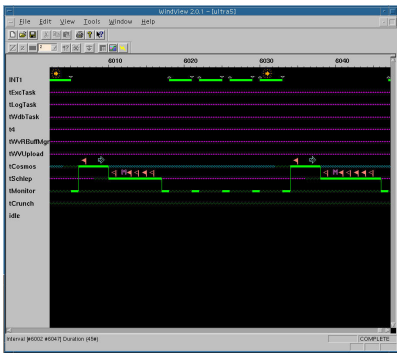
- Improved usability for configuration and control
- Improved log navigation with the new radar facility and bookmarks
- The new event table
- More robust operation
- Improved extensibility for third party integration and user customization

provides detailed analysis and graphical visualization of system events revealing the complex interactions of tasks, interrupts, and system objects of an application executing on a target.. Context changes are clearly shown as well as system events such as semaphores, message queues, signals, tasks, timers, and user events.

WIND VIEW is best suited when developers need to diagnose and solve one or more of the following problems:

Task scheduling problems such as deadlocks, starvation, and race conditions

Performance problems such as priority setting, resource contention, and mutual exclusion



Timing problems arising from the interaction of interrupts and tasks.

Story ID 2

VME64x Extender Card

Configured for 6U backplanes with 160mm card depth, the extender board is available with connectors for J1/J2/J0 and for J1/J2. The test sector offers easy access, with tapping points right and left of the jumpers for all signal lines (and J0). GND, +3.3V, +5V, +12V and .12V are linked to power layers and each is accessible through a spade connector.

- 10-layer Multilayer construction
- Characteristic impedance 55 Ohm +/.10%
- Contact pin/jumper for each signal line
- Extender depth 300.0 mm (for use in 160 mm card cages)
- PCB thickness 3.2 mm +/.10% (with edges milled to 1.6mm for use in standard card guides)

Story ID 3

Health Monitoring Board

Elma has released a monitoring unit for **VME, VME64x, VXI and CPCI -Systems with these features:**

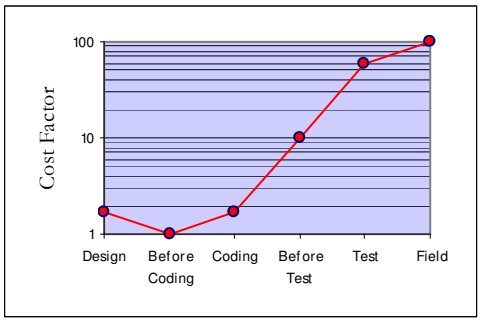
- 8 bit microcontroller ; 12 bit A/D converter
- Voltage monitoring (max.8 voltages)
- Temperature monitoring (max.9 temperature sensors)
- Fan control (max.6 fans) - 3 speed levels depending on temperature
- Signal generation (for example VME: ACFail*/SysReset*)
- Display: Voltages (good/fail), Tempfail, SysFail, FanFail
- Reset-button: touch protected
- 2 configurable alert outputs
- Service interface RS232
- Monitor: 100mm x 135mm ; Display : 91,44mm x 19,05mm
- The board is delivered with installation software for Windows 2k; XP that allows for easy configuration of all monitored inputs.

Story ID 4

Source Code Inspection Tool for C and C++

Doug Carlton, Design Assurance Automation Engineer

Philips Medical Systems ATL Ultrasound



"Over a three month period this year, ATL Design Assurance conducted an exhaustive evaluation of three C++ code analysis tools; Abraxas CodeCheck, Parasoft CodeWizard and Programming Research QA C++ Generation 2000 (QA C++ G2K). The "litmus test" of the evaluation was for the tool-under-evaluation to accurately and rapidly analyse Visual C++ 6.0 code containing the Standard Template Library ver4.0 and the ACE Design Pattern Frameworks. The only tool to successfully pass the litmus test was the Programming Research QA C++ G2K.

Having passed that checkpoint, QA C++ G2K was used to review several thousand lines of safety-critical C++ code that had already undergone two manual code inspections. QA C++ G2K identified several defects and coding standard non-compliances that were missed by the human reviewers. As a result of this outstanding performance, ATL Ultrasound software development selected QAC++G2K to augment it's code review process."

Programming Research delivers solutions for the following:

- **Static analysis of C, C++, Java**
- **Definition and enforcement of coding standards (both industry and bespoke)**
- **Software quality assessment via code audit**
- **Software metric assessment**
- **Software process improvement**

Story ID 5

VME Courses from 2nd to 6th Feb.

Part 1: Introduction to the VMEbus

Outcome: Students will get anchor points from which to solve their day-to-day problems later-on as they work with VMEbus boards and systems.

Part 2: VMEbus for embedded software developers.

Outcome: Students will learn VME from a software point of view. This will allow them to configure and access VME devices from their C based projects. (Some VxWorks techniques are explained, but this is not a full VxWorks training course). A working knowledge of C is required.

VxWin™ The KUKA real-time extension to Windows

What is VxWin ?

VxWorks from Wind River is one of the leading real-time operating systems. In many controls or embedded solutions VxWorks handles the real-time tasks combined with a Windows-PC for visualisation, database programming and/or ERP connection. **VxWin allows VxWorks to be installed together with the Windows operating system on the same PC while keeping its full realtime capabilities.**

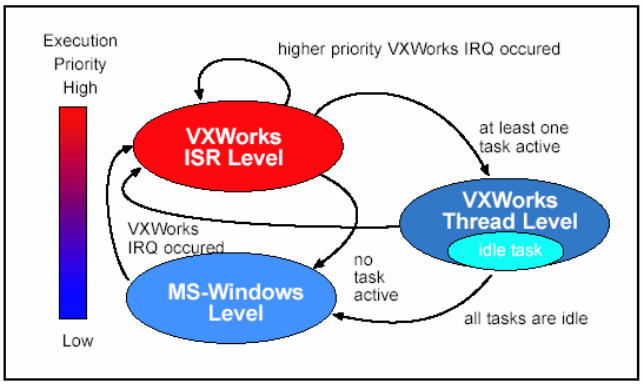
These are some benefits of VxWIN:

Reduce Hardware Costs

- No need for separate control hardware or intelligent co processor boards
- Drastically increases MTBF due to less system components
- Helps reduce size and weight of the total system

Reduce Software Costs

- Fast learning curve; known development tools (Visual Studio / Tornado)
- Re-use of existing Windows or VxWorks software and know-how



- Not a proprietary real-time extension, therefore remote debug fully supported

Story ID 6

NDDS—Network Middleware for Real-time Applications

NDDS eliminates network programming.

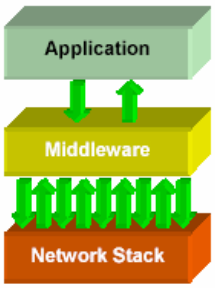
Network middleware is a thin layer of software that sits on top of a network stack. It replaces complex, lengthy, and error-prone network code with high-level services.

NDDS is network middleware that presents an easy-to-learn publish-subscribe programming interface.

The publish-subscribe model simplifies many-to-many communications.

Applications use named topics rather than network addresses to distribute data.

- Publishers simply create a publication and give it a topic name. Then, to send an issue (data) the application just calls a single NDDS function.



- Subscribers simply create a subscription for a topic name and tell NDDS what to do when a new issue arrives.

Every time the publication has a new issue NDDS handles the network I/O, transparently sending each issue from the publisher to all subscribers with a declared interest in that topic.

If you are writing a distributed, real-time application, NDDS will reduce your development effort and simplify your application design.

Story ID 7

Tornado 2.2 for VxWorks 5.5 Training

Embedded Overflow is the Certified Training Partner of Wind River Systems.

4 day courses are held in Sydney or on demand. Currently courses are scheduled as follows:

16—20 February 2004

22—26 March 2004

26—30 April 2004

24—28 May 2004.

Students gain hands-on experience and receive personal guidance from an expert instructor.

Students examine details of the Tornado environment, focusing on the most commonly used areas. Specific questions are addressed.

Lab sessions allow hands-on application of course concepts.

After taking this workshop, students will have the knowledge to:

Take a requirement specification to a working application.

Design, develop, debug, build and test real-time applications with VxWorks

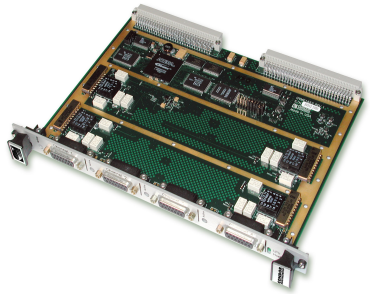
Efficiently use the tools and functionality of VxWorks.

For further details and bookings go to

www.embeddedoverflow.com.au.

QVME-1553 high density VME Card by Condor Engineering

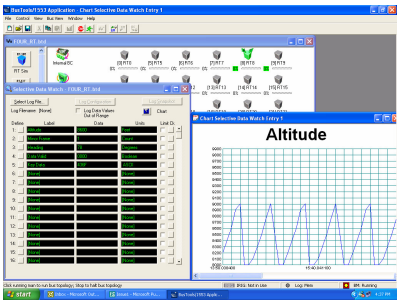
The QVME-1553 provides new levels of performance and flexibility for MIL-STD-1553A and B Notice II on the VMEbus. Available in commercial, industrial and conductively cooled versions with one, two or four dual-redundant channels, the QVME-1553 includes advanced API (Application Programming Interface) software that reduces application development time. Standard features include selectable transformer or direct coupling, 1 Mbyte of



RAM per channel, 45-bit message time-tagging, triggers, extensive BC & RT link-list structures, error detection/injection, advanced BC functionality, auto-matic/manual RT Status Bit and Mode Code responses plus IRIG/GPS synchro-nization capabilities. Optional IRIG B signal Receiver/Generator, variable volt-age outputs and environmental configura-tions are available. The QVME-1553 Bus Monitors provide unparalleled error detec-tion and 100% monitoring of fully loaded buses.

Multi-function Interfaces
QVME-1553 multi-function interfaces are easily configured to operate with simulta-neous Bus Controller, 31 Remote Termi-nals and Bus Monitor functionality.

Single-function Interfaces
Single-function QVME-1553 interfaces have all the features and functionality of the multi-function versions, but only one major operational mode is enabled at a time. Each interface can independently emulate either a Bus Controller or 31 Re-mote Terminals or Bus Monitor.



Software
A high-level "abstract" 1553 API is pro-vided in source code, along with support for VxWorks, LynxOS v4.0, Windows XP, 2000, Me, NT, 98 and 95. Contact factory for Red Hat Linux, Solaris and other OS support. To access 1553 functionality without software development, ***BusTools*/1553**, Condor's MIL-STD-1553 bus analysis, simulation and data logging/monitoring solution is available using Condor's integrated PCI-MXI-2 support.

Story ID 8

INFORMATION REQUEST FORM

Fax this page to 08 8370 1466

Your Name:……...

Your Company……...

Your Phone Nr……..

Your Email……...

Please send me more information about product / story ID (please circle):

Story ID. 1 2 3 4 5 6 7 8