

AUTOMATION & ELECTRONICS

Precise Control
International Systems Integrators

A&E Newsletter April 2016



1 HMA EXPO

10 YEARS OF A&E AT HMA

2016 marks the celebration of A&E's 30 years in the sawmilling industry in the South Pacific, whilst A&E USA celebrates its 10th year being based in the United States of America.



PICTURED L-R: PETE McCARTY - BRIAN SMITH - KEITH HAIGH

Now with more than 700 installations worldwide A&E USA celebrates and thanks those customers in the United States who have invested and intrusted in A&E USA's support over more than thirty sites in the United States. A&E USA established in 2006 after acquiring the exclusive rights of Silvatech Corporation and combined with the close alliance of KDS Windsor Kiln Drying systems says thankyou to HMA for allowing AEUSA to participate yearly in their National Conference and the continued association with their members . A&E commits and continues to stay at the leading edge of product development and support. We invite you to meet our Engineering support people based in Asheville, North Carolina.

PICTURED:

Joe Korac & Alex Trapaski
Techincal Support for AEUSA



2 Kiln Projects USA & NZ

In recent times Automation and Electronics have been very busy with the installation of their proprietary software in Windsor CDK Kilns. Each kiln includes A&E's Dryspec™ CDK software which incorporates DryTrack™ ECHO which is an in-kiln moisture measuring system. Drytrack™ tells Dryspec™ what the moisture content of the timber inside the kiln is currently. From that information Dryspec™ sets the push rate of the timber fed inside the kiln.

Current projects include:

CDK

Weyerhaeuser Millport USA, West Fraser Mansfield USA, Jordan Lumber Mt Gilead USA, and West Fraser Seaboard USA (2 kilns).
Pan Pac Millburn NZ.

Dryspec3

In addition, A&E are currently upgrading the control system for three existing batch kilns at West Fraser Mansfield USA
Pinepac, Auckland NZ, upgrade from Kilnwatch2000 to Dryspec™3



Dryspec2000

Sequal Lumber (2 kilns)
Kawerau NZ

Kilnwatch2000

Tropikwood, Fiji

Recently completed projects include:

Dryspec™ upgrade from Kilnwatch 2000 software at Tumu Timber Hastings, New Zealand

A&E EXPO STANDS USA 2016

RICHMOND VIRGINIA EXPO - MAY 2016 www.exporichmond.com

EXPO RICHMOND

TIMBER PROCESSING & ENERGY EXPO - PORTLAND - SEPTEMBER 2016 www.timberprocessingandenergyexpo.com



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3 BORAL KOOLKHAN

GRAFTON AUSTRALIA

EDGER OUTFEED SCANNER

This project has just been completed by Engineer Paul Cable at Boral Koolkhan, Grafton, Australia.

The scanner is on the outfeed of a Gibson Edger.



• Edger Outfeed showing closeup of Joescan sensors

Two JoeScan sensors were used to scan boards lineally on the outfeed belt to detect board profiles and separation in order to automatically adjust the Picker fingers to ensure maximum recovery. This was achieved and edgings were then sent to their destination.



• Edger Outfeed

4 S.A. PINE MONARTO

S.A. AUSTRALIA

RISEN FROM THE ASHES

Fire at S.A. Pine Monarto plant leads to Refurbishment

A fire in a saw dust and mill room at S.A. (South Australia) Pine's Monarto site in March last year destroyed a stacker, destacker, planer and binsorter. The framework of the building survived, and since then the roof has been replaced and the building fixed.

Much of the other mechanical equipment survived, though all of the control systems were destroyed and, therefore, removed. The Monarto plant was completely rewired and new control systems were supplied and installed for the Grade Trim, Binsorter and Stacker following the fire.

A&E engineer Tony Cable handled the new installation and commissioning along with A&E engineer Raj Muthusamy. Tony had the following to say "As part of the necessary re-furbishment process, Automation & Electronics supplied their Binview TM software for the sorter plus MCC and control panels".

"A&E also supplied the same components for the stacker and destacker and replaced the Cyprus Grade Mark Reader", Tony stated.

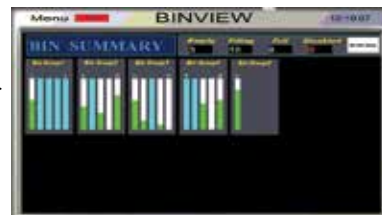
- TOP LEFT: Monarto Binsorter pic
- BOTTOM LEFT: Monarto Trimline pic



• Monarto Screenshot BOARDDATA



• Monarto Screenshot Bin 2 volume



• Monarto Screenshot Bin Summary



A&E EXPO STANDS
OZ 2016

AUSTIMBER - AUSTRALIA - APRIL 11TH - 16TH 2016 - STAND NO: 45

International Systems Integrators

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SA. PINE KUITPO S.A. AUSTRALIA

NEW EDGER & UPGRADE SCANNER FOR KUITPO PLANT

In the Mount Lofty Ranges region of South Australia SA Pine's forests provide sustainable wood production. Recently, their Kuitpo plant upgraded their optimized edger and scanners on their quad reducer mill.



• SA Pine Edger



• SA Pine Edger Infeed with Joescan sensors



• SA Pine Edger Kuitpo Quadband

There were two projects involved here:

A new X/Y Scanner on the Quadband line and a second project, being an Optimizer upgrade on the Board Edger, where A&E replaced the Jaymor software with work on behalf of A&E carried out by Software Engineer Tim Johnston.

The project was carried out by Automation and Electronics in conjunction with Forestry S.A.

Mr Ian Robinson, General Manager of SA Pine Pty Ltd, had the following to say concerning their involvement with Automation and Electronics. "One of the key reasons that we chose A&E was our previous dealings with that company, back in 2003 when A&E installed their scanning system to the quad reducer during an upgrade of our Kuitpo sawmill".

"Other major contributing factors include the ease of dealing with companies in New Zealand compared with Europe or America, competitive pricing and the fact that A&E were able to meet our tight deadlines and specifications" Ian said. Further emphasizing the key issue of deadlines, Ian further stated "we were under pressure to get the plant up and running ASAP and A&E pulled out all stops to ensure that they met our demanding time frame".



• Edgerboard screen shot



• Logline pic prior to first use



• Quadband pic prior to first use



• SA Pine Kuitpo Operator Booth (where scanner is installed)



• SA Pine Kuitpo Scanmeg HD Scanner



• SA Pine Edger in action



• SA Pine Edger in action

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TARANAKI PINE NEW PLYMOUTH - NEW ZEALAND

LOG CARRIAGE SCANNING & OPTIMIZER UPGRADE

In order to improve production and conversion, an upgrade to the existing log carriage and Optimizer upgrade was recently commissioned at Taranaki Pine in New Plymouth. The Log Carriage was upgraded to a new 3D system incorporating Automation & Electronics proprietary software Logview TM.



• Taranaki Pine Operator Console

The project also incorporated five new Scanmeg™ CV12 scanners which replaced the existing Inovec curtain scanning system. A&E software engineer Martin Dodd handled the Optimization and, together with A&E project engineer Scott Arendse they commissioned the optimized carriage. "Log conversion rates have now improved (from 23 M³/hr to in excess of 24 M³/hr representing some 5% in recovery)", says A&E Engineer Tony Cable who oversaw the project. "There are also future gains to be had by speeding up the load and go sequence once some mechanical modifications are introduced".

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PROFILE WOOD PRODUCTS THAMES- NEW ZEALAND

EDGER & HORI UPGRADE IN DOUBLE QUICK TIME IN THAMES

In today's business, efficiency is the key. A case in point was Profile Wood products in Thames, where the horizontal saw and edger were utilizing the same PLC. In this instance the edger is particular was the bottleneck which constrained production from the saw.



• Edger Operation with new operator console and added panel view HMI

The aim of this project was for both pieces of machinery to be run as stand alone units and to have more option for flitch cutting pattern on the edger.

Automation and Electronics (A&E) worked along side NZ engineering company P.T.E.L. (Pacific Timber Engineering Ltd) during this project which involved the new controls upgrade and additional saw positioners as well.

A&E Engineer Raj Muthusamy tells us that "We upgraded to the latest technology using the latest Compact Logix PLC & RMC Delta Motion controller" "This controller was installed on the edger, whilst the horizontal saw is now a stand alone unit, still on the existing PLC, to be upgraded at a later stage". "The project also called for the installation of an additional saw, (from three to four moving saws) plus an automated picker" said Raj.



• Horizontal Saw pic



• PLC panel inside

P.T.E.L. handled all the mechanical aspects of this project, whilst A&E handled the controls which included a new motion controller to control all four moving saws and the picker. The challenge, in this instance, was to complete and commission the entire project over a four-day labour weekend. Raj tells us that the project was successfully handed over on the Tuesday morning following labour weekend.

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PARAMOUNT STAINLESS TAURANGA- NEW ZEALAND

NEW BOTTLING PLANT FOR PARAMOUNT

A locally owned and operated Tauranga New Zealand business of some 50 plus years, Paramount Stainless needed the assistance of a Company who were experienced in Siemens PLC's for their client, owner of a bottling plant. Paramount have extensive experience specializing in stainless steel fabrication in an ISO 9002 environment.

They manufacture a vast range of products for residential and commercial environments, including Bottle Handling Systems from forming to filling.

Automation & Electronics were contracted to assist in developing the PLC code as well as supplying the PLC and HMI hardware for a bottle debagging machine.

This machine was to be installed upstream from a filler machine and this required the debagger to supply bottles to the filler line at a rate of 200 bottles/minute.

The HMI interface was designed to present a clear indication of the machine's state while the PLC code was well documented and simplified allowing for easy maintenance and troubleshooting.

Mr Ray Lowe, for many years the owner of Paramount, had this to say in regard to the project, "We found A&E to be very versatile and able to run the PLC from their head office in Mount Maunganui". " Following in-depth discussion we were happy with the pricing and it was clear from the outset that Scott Arendse, the Project Engineer chosen by A&E to handle the job was someone who understood our needs and that of the machinery involved", said Ray.

Ray said that Automation and Electronics provided the parts & software required for the project and Scott got the milk bottle debagging machine up to speed very quickly.

The project was semi-commissioned in the workshop and then taken to site.

"The machinery has been installed and commissioned with any minor issues quickly sorted from A&E's head office and I would be happy to recommend A&E for anyone wanting a project commissioned requiring automation and electronics" Ray stated.



• Paramount bottle plant



• Paramount 161

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PAUL INDUSTRIES
TAURANGA - NEW ZEALAND

BESPOKE SOFTWARE FOR BUILDING PRODUCTS MANUFACTURER

Paul Industries ("Building products you can count on"), is a forty-four year old business based in Tauranga, New Zealand. Pauls manufacture a raft of building and fencing products in their factory.

At the end of last year, working in conjunction with local industrial electricians, Philip Jones Electrical, A&E upgraded Paul Industries roof safety mesh and building paper system to include event logging. This event logging software was written specifically for Paul Industries and records downtime and faults on machines. This now affords Pauls with a full shift production tally, a continuous readout of any issues that have happened during shifts and also records the actual shift logons and logouts.

Frank Bishop, Operations Support at Paul's said that from his perspective the project was to build and install new software on their mesh welding machine to allow them to track production, fix inefficiencies and improve user-friendliness.

Frank said "I chose A&E for this project because we needed a specialist PLC programming company to carry out upgrades on our machines". "I felt that A&E fitted the description perfectly, whereas our previous contractor had let us down", said Frank.

In closing, Frank said that he felt the service they provided after completion of the project was exceptional. "I have had technicians from A&E back in several times to fix glitches and they have willingly returned and solved any of these teething problems we have had" said Frank. "I am currently working with A&E for ongoing projects".

Tim Johnston, one of A&E's software engineers, wrote the software code for the event logging project and also wrote the PLC code modifications to improve production and improvements to the machinery.

Chris Paul was A&E's Project Engineer for this Project.

**NEW STAFF
MEMBERS
NEW ZEALAND**

A&E NZ WELCOMES

"NEW SOFTWARE ENGINEER FOR A&E RADU "ALEX" SIMIOANCA



As part of the Automation and Electronics growth expansion, several new members have or are about to join the Company. The latest to join is Radu 'Alex' Simioanca who is originally from Romania but, together with his wife has lived in New Zealand for some 14 years.

Alex says that he has a strong interest in software development and engineering of robust and reliable systems, finding new and interesting communication solutions between plant components and software management systems.

Alex states that "I had the chance to develop my skills and understand more about various technologies by working for Brightwater Engineering and ABB as part of the software team being involved in the design of new control systems for power plants in New Zealand".

He also says "I've also been fortunate to develop and implement new PLC baggage handling software for two airports in Australia as well as successfully designed and implemented an independent failover communication system between RFID devices, PLCs and main control systems for Holcim Australia using modern and well established software development techniques".

Alex believes that he would like to consider his area of expertise being problem solving in automation and being able to use software as a tool, either on database development or other bespoke software systems. Alex says that "I use languages such as T-SQL, C, C#, VB.Net, Java, Python as well as PLC/SCADA development platforms such as Allen Bradley, Schneider Electric or ABB's 800xA".

In closing, "A&E gave me the chance to be part of a great team where I hope my skills and knowledge will be very useful" he says. **In his free time Alex likes to play the clarinet.**

Control System Engineer

Dries Nel



"South African Control System Engineer to join A&E"

Starting in A&E in mid-April this year as Control Systems Engineer, South African Dries Nel has vast experience in Rockwell programming. One of his previous roles is as a trainer for Rockwell Automation.

Dries is also an instrumentation technician by trade.

His current position is as a control systems engineer and trainer in a South African mine.



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TONY CABLE

A&E FOUNDER PARTNER

“ NOT THE SHY RETIRING TYPE ”

In February of this year, Tony Cable, who (along with Director Brian Smith), formed the company Automation and Electronics back in 1986, “Retired from “active service”



The concept of A&E the Company that now employs over 18 people, both in the NZ head office and in the United States first started as an idea between Edwards Engineering Ltd (Marine & Sawmill Engineering, owned by the Owens Group) & WAM (Woods and McIntosh) Electrical, where Tony worked. Tony previously had worked for another local Tauranga firm “Communication House” which was acquired in a requisition by A&E in later year’s. Prior to that Tony served in the Merchant Navy in the UK as a senior in Radio & Radar and travelled to many countries around the world before immigrating to New Zealand to marry his wife Liz.

Tony remains an invested shareholder and continues to provide a backbone of support and training for A&E Engineers with his extensive knowledge of all types of machine centers that have crossed his path over the past 30 years with A&E and without doubt he will be in regularly at the end of the week to share a beer with the team!



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