

looking for opportunities to expand its sales network overseas.

Integrating applications

Another leading Australia software supplier, Mincom, has extended its logistics capabilities by acquiring Comlabs Systems, also of Australia. Comlabs developed the MineTrak stockpile & supply chain management system, which is used extensively by coal majors including Rio and BHP Billiton, and the laboratory information system CCLAS. Mincom claims to have developed the first ERP software for mining 30 years ago and its clients include 17 of the world's top 20 miners. In announcing the acquisition Mincom CEO Richard Mathews said, "Our customers tell us they want their software supplier to take greater control over the third party technology products used in their business and this acquisition allows us to do exactly that."

Mincom is now marketing Comlabs' products as parts of its MineMarket suite, which consists of three modules: Logistics (formerly MineTrak), tracks product by volume and grade; CCLAS identifies, tracks and manages samples, linking them to the tracked product; and the Sales module. Each module is still available as a standalone application but Mincom's Harry Fishman says "as a value proposition they are greater with richer data as an integrated package."

Mincom has replaced extensive spreadsheet-based tracking systems with an integrated database platform. MineMarket Logistics is developed in .NET and C# and can interface with third party software including ERP systems, SCADA controllers and asset management systems. Integration enables the data

held in different organisations and systems to be consolidated in a single database. Taking the Dalrymple Bay Coal Terminal (DBCT) as an example – DBCT runs MineMarket Logistics on a CITRIX server and its 12 mine customers have a MineMarket terminal at rail load out points with direct access to the DBCT server. Queensland Rail, shipping companies, surveyors and laboratories also have the same link. Stockpiles are visible as they move through the chain on the MineMarket Logistics Management Dashboard. Transponders on the rail network track the progress of trains to DBCT, which can then program its stackers and reclaimers against the schedule of ships waiting to ensure the most efficient loading. Mines are able to view which ships were loaded and get details of tonnes and grades.

Importance of coordination

Fishman says integrated supply chain management enables stakeholders to optimise overall supply chain performance as well as the performance of its individual elements. End-to-end coordination is particularly important for coal terminals because "most are now 'real-estate' constrained so that the stacking and reclaiming process needs to be closely integrated with rail and shipping so that the resident time for stockpiles is low".

In power generation US-based Energy Softworx Inc (ESW) continues to have success with its core Fuelworx application. Director of Sales John Hart says smart utilities can save a lot of money by managing and integrating the way they manage fuel contracts, track coal inventories and use that information across applications. Within a utility coal is typi-

cally managed and tracked in three ways: in tonnes by purchasers; in BTUs by plant managers; and in dollars and cents by accountants. Typically each department uses spreadsheets recording different properties of the same coal that are input into different applications.

Fuelworx centralises all the data in a single database that can integrate with other applications such as financial software, saving time and making reconciliation much simpler. As much of the information is dynamic, Fuelworx tracks where and by whom changes are made, updates all the relevant applications and leaves an audit trail. Doing this in real or near-real time means utilities can approach the spot market with a more complete picture of stock levels, expected burn profile, cost and current position against existing contracts – rather than having to wait till the end of the month for a reconciled position. This is increasingly important as utilities look to take advantage of opportunities on the spot market.

Managing costs

In the area of logistics ESW is helping utilities manage a significant increase in rail car maintenance costs. In 2004 the Association of American Railroads introduced Phase I of its Advanced Technology Safety Initiative that sets peak load impact limits for rail cars. Four different alert levels are established and the "AAR condemnable" threshold is set at 90-139 kips. Coal wagons with loads measured over 90 kips must be taken out of service and repaired, at significant costs to utilities. ESW had earlier developed Railworx to manage both coal supply and the rail cars themselves. Railworx uses data from the railroads to track car miles and positions and compile information on cycle times that can be compared against contract terms. Utilities can also use Railworx to track wayside test results across a fleet. This way, says Hart, utilities can better manage the maintenance of the rail car fleet, change wheels and make repairs on their own terms in a much more cost effective manner, rather than having to pay for the repair cars on the railroad's terms.

For the future ESW is developing Budgetworx, a planning and forecasting tool that will enable utilities to put together budgets and supply plans. Hart says one US utility has achieved a breakthrough in

Transport scheduling can be improved via full transparency of the supply chain





PT Adaro uses QMaster's software to provide tracking, modelling and optimisation of coal movements across its complex domestic and export supply chains

getting its pricing regulator to accept an increase in its charges based on pricing forecasts rather than retrospective actual costs. Planning software will help utilities forecast accurately and Budgetworx is currently being developed to address this; it is expected to be on the market in the first half of 2007.

Incorporating logistics

Another trend in a more dynamic supply chain is the greater use of logistics data in traditional energy trading and risk management (ETRM) applications. US software house Allegro is well known for ETRM software but senior energy consultant Bevan Jones says the logistics capabilities of its software are highly developed and "where Allegro really differentiates itself" from other ETRM applications. Using Allegro customers forecast future production by mine or burn for a utility from the clean dark spread, based on available market pricing. Actual, scheduled and forecast volumes can be compared and Allegro always uses the best available volume for position reporting at any point.

Allegro can track all vessels, trucks, railcars, barges and record quality analysis in the shipment details. It also supports blending at any point in the supply chain to meet either supply or demand customer requirements. Bevan adds that "Collaboration across the various departments in the company in any geographic area con-

nected to the internet is an area where Allegro excels. For example, all authorised users in any area can view any correspondence, remarks and documents associated with shipments and/or trades. Allegro integrates with Microsoft's calendar features and users can easily track associated calendar events."

Allegro also has forecasting tools that allows users see how "what if" supply chain scenarios would impact on future positions. "For example, one could create a 'SA Derailment' scenario and apply that to December sale positions at Richards Bay Coal Terminal" says Jones. This could then be combined with a demand scenario such as a cold European winter. Jones adds that functionality is dependant on customer requirements and that "All of our coal clients use slightly different features of Allegro and each uses them in a slightly different way, such is the flexibility of the software."

IBM bags MRO

IBM recently announced it had reached an agreement to acquire leading enterprise asset management (EAM) software provider MRO Software. MRO has installed its Maximo EAM software in major coal terminal including both facilities at Newcastle Australia and the Dominion Terminal Associates facility at Newport News in Virginia. Maximo allows coal terminal operators to improve performance by move from a reactionary/breakdown

maintenance system to a tightly managed preventative system.

Shortly after announcing the MRO acquisition IBM secured a 2.5-year, \$29M contract to "streamline" the financial, supply chain and work management operations of the Southern Company; an Atlanta-based utility with 4.3M customers. The project includes a combination of Maximo modules covering sourcing, contracts, inventory and accounting for asset management which will work in parallel with financial software from Oracle. As rising coal costs put pressure on utilities and other coal users to better manage supply chains this type of contract where equipment maintenance and asset management systems are integrated into business logic is likely to become more common.

ASXDry upgraded

ASXMarine has released an upgraded version of AXSDry, its interactive database of vessels, vessel positions, ports, waterways and routing tools for the dry bulk industry. The new release has been made fully compatible with the latest version of Microsoft Internet Explorer and features a new and improved port database on approximately 9000 ports. The port library covers cost and restriction information and allows users to input their own information for cargo calculations. Sensitive information can be kept private or shared within a defined user group. □