BE2006 Plant Industry Round Tables

Mining / Light Industries session

May 24th, 2006

Attendees:

	Name	Affiliation
Chairman:	Peter Blake	Hatch
Facilitator:	Steve McNany	Bentley Plant
Technical:	Scott Andrews	Bentley Plant
Minutes:	Ian Matthew	Bentley Plant
Session attendees:		
	Al Elizondo	Intel Corp.
	Bruce Meyer	Intel Corp.
	Derek Hepworth	Intel Corp.
	George Brown	CH2M Hill
	Lars Christensen	NNE
	David Ernest	Metso Minerals

Discussion Topics:

Discussions were held openly on a list of pre-determined topics identified as needs within the Bentley Plant suite. Topics for discussion were:

1. Procurement
2. Electrical Applications
3. GIS Interfaces
4. Specs & Catalogs
5. Datasheets and Specifications
6. 5D Visualization & Advanced Interfaces
7. Tag Lifecycle Management
8. Implementation of Engineering Data Management Solutions

Notes on the discussions that took place follow.

1 – Procurement

CH2M Hill: Main challenge is materials management.

Intel: Procurement system is not important – **link** to a procurement system is important. Intel use SAP and want commodity codes to be able to do the link. Won't do estimating, but need to be able to check back with procurement through SAP.

NNE: Use Oracle for procurement, but don't need a procurement **system** – want a link. Also want to link to SAP for maintenance. Currently use MS Access as an intermediate step

Intel: Use MAXIMO for maintenance – moving to SAP. Need a link back from SAP to Engineering to identify where commodities are physically.

CH2M Hill: Use in-house s/w and MARIAN. Need links to/from procurement s/w. Trying to create standard commodity codes to simplify this.

Metso: Made own links to SAP. There is a need to link to Procurement

2 – Electrical Applications

NNE: European market uses local s/w. NNE uses Danish s/w and made links. Is a Bentley gap, but not important to NNE.

Metso: Home-grown solution - Using spreadsheets and hand-drawn electrical diagrams in AutoCAD. Re-use P&ID's.

CH2M Hill: Have used InTools for last 9-10 years. Implementing SmartPlant P&ID for 'intelligent' P&ID's. Can't handle 'typicals'. InTools used successfully for loop diagrams. Over ten's of thousands of components loaded. Use 3rd party s/w from Atlanta (written specially for CH2M Hill) to manage cable drops, connections, conduit, etc. Referenced into PDS.

Intel: Use PowerTools from SKM and EasyPower from ESA, neither can handle large plant. Need something that will handle over 1 million points. Israel uses home-grown s/w. SKM & ESA handle the engineering well. Use 3rd party s/w for cable-tray fills. Use home-grown s/w for 'gaming'. Needs links to/from this in Bentley Plant. Need to populate points quickly. I&C – generate one-lines but then lose track. Need database for points management and then analysis. Need to hand this database to the operating plant and use for greenfields or retrofit. Quick churn needed. Currently create lots of databases – this is a big problem because of use of proprietary s/w.

3 – GIS Interfaces

CH2M Hill: don't see a need for this. Maybe in Civil, but not in power.

NNE: No need

Metso: Again no need at this time.

Hatch: Maybe for civil

Intel: No requirement. Use AutoCAD Map for gaming. Don't need GIS interfaces.

4&5 – Specs & Catalogs and Datasheets & Specifications

CH2M Hill: Need to get more from vendors. Want the data electronically. Format??

NNE: Standards are non-existent in pharmaceuticals. Catalogs are difficult as dimensions change between manufacturers. Would like to get dimensional data directly from the manufacturer. Need physical and functional data for P&ID's and layout. Engineering data and dimensional data should be distinguishable.

Intel: AutoPLANT Catalogs in SQL would be nice! Currently creating SQL queries so that pick lists can be created for P&ID's – based on collecting info from Word docs! Need to tie graphical and non-graphical data. Intel's specs are currently 'phone books'. Need to convert this into another electronic form – Specgen? Currently valve spec for manual valves is 300 pages.

Metso: getting vendors to comply with specs is difficult. Have to make exceptions in order to get supplies.

Intel: want to be able to make estimates for procurement to be able to get better lead time for suppliers. (And perhaps better discount!)

NNE: Don't know supplier details at P&ID stage. In 3D need to know correct dimensions. Need to be able to add correct dimensions later.

Intel: get engineering data (like pressure drops) during the P&ID stage. Want to be able to click on the component in the P&ID and view engineering data.

6 – 5D Visualization & Advanced Interfaces.

Intel: 5D is xD! Need to know dependencies for construction planning. (For example Concrete: setting time before the Tool lands) If items are 'late', be able to quickly reschedule. Tools needed for scheduling and rescheduling. A 'risk minimization' tool. 'Key Date' matrix evaluation.

Metso: Construction variables are different. See a need to use interfaces.

NNE: Don't currently use 4D. Would be interested in a tool fro Fast Track engineering.

CH2M Hill: Use visualization for a number of activities. Not had a great deal of success with estimation. Establishing links between 3D model and Primavera is very difficult. Would like this to be made much simpler. This would then be extremely valuable.

7- Tag Lifecycle Management

NNE: Links to Materials Management

Hatch: Links to decommissioning

NNE: Use eWarehouse. Need some kind of a 'backbone' and need to provide a link from Engineering. This is a requirement, but not in design.

CH2M Hill: Tag lifecycle is not that important for EPC's. Tag data is supplied as lists as part of the project deliverables. Can see value in handing over 'more' intelligence.

Metso: Customers come back after 5 years or so for modifications and have tag data. Maintenance of this data is non-existent.

Intel: Have a huge need for this as an operator. Management of the tool is a big issue within Intel. Need a strong backbone with links to Engineering. Tag maintenance will be required for retrofits. Needs to link to MAXIMO and SAP. Need to supply operational safety information to fire marshals etc. Need to have all this information in a database 'somewhere'. Intel will keep this data up to date – they have to!

Hatch: Had a customer that didn't want any of this. Didn't seem right!

Intel: Data has to be useable. "We can't afford not to know what is where".

8 – Implementation of Engineering Data Management Solutions

CH2M Hill: Looking at SmartPlant Foundation. Use an Engineering Data Warehouse during the design process. Have problems coordinating between disciplines, procurement and construction. eWarehouse would be a HUGE benefit.

Metso: Have a long way to go but is important. Clients don't have the skills to manage this information. Maybe large clients.

NNE: Owner/operators don't want ALL the EPC data when they operate the plant. P&ID's and datasheets – Yes, but 3D? – No! eWarehouse seems to be a good solution but can it handle building data, electrical data, etc. Non-tagged items?

Intel: Relates back to specs. Need to track spec data. Need to track non-tagged items, construction packages… eWarehouse has to be extensive. Must be able to get the data OUT! 'Business Objects' is a good package. System has to be a repository, not a cesspit! Need to have a good tool to extract and use the eWarehouse data.

Conclusion

There was insufficient time to prioritize all the items as the chairman had to attend the Advisory Group meeting taking place immediately after time meeting.

Peter Blake thanked all attending for their input.