

DCS Upgrade – A Case Study

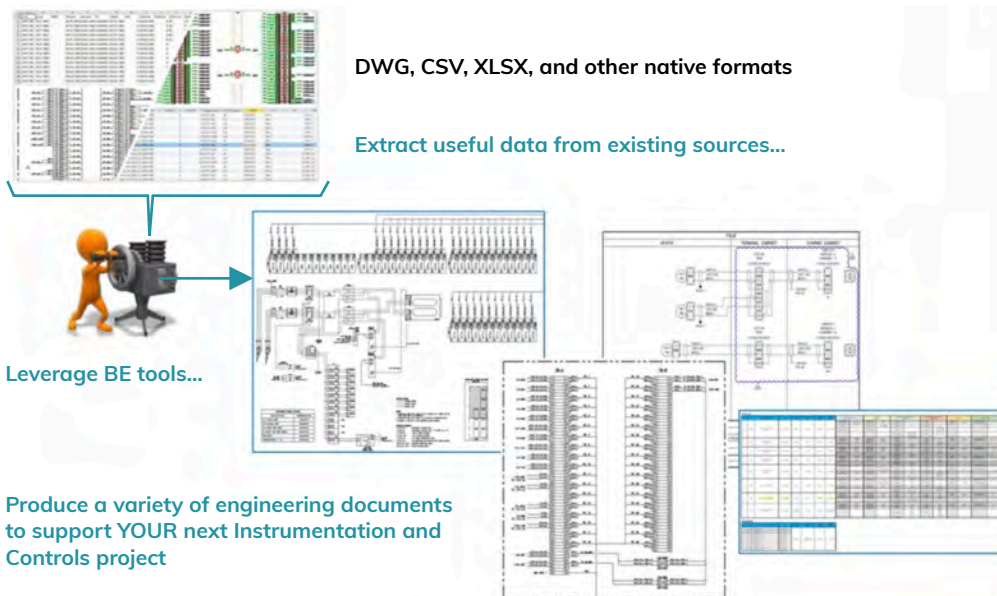
A client contracted Brindley Engineering to provide construction and check-out documents related to a DCS upgrade. With many new homerun cables to be installed, project deliverables included junction box and marshaling wiring diagrams, loop drawings and all related scopes of work. Between 600 & 800 instruments were to be re-wired, loop checked and returned to service during a turnaround. AutoCAD loop drawings existed for approximately 60% of the affected devices.

Our Challenges

To avoid manually redrawing all the common loop data from the existing loop drawings to the new loop drawings, and to avoid extensive QA/QC loop checks that would be required for all loop data if drawn manually.

BE Innovative

A team of engineers and designers deployed standardized BE methodologies to review existing I/O lists and applicable Client standards. The team then worked to classify existing drawings into drawing type sets, extract data from various native file formats, build a project database, and then to develop custom programming tools required by the project. Once the data had been retrieved, it could be leveraged in several ways, such as standardizing title block entries, producing exception lists for review by the Client, and finally, programmatic generation of loop drawings and wiring diagrams.



Exceeding Expectations

The Client soon recognized and came to appreciate the quality of the documentation. Because engineering data could be cleansed, organized and queried in multiple ways, the output was generated much more quickly and consistently as compared to traditional CAD drafting with manual drawing cross-checks. The result: ZERO technical corrections received from the Client for either the IFC wiring diagrams or loop drawings. Brindley Engineering produced 600~800 drawings months sooner than expected by the Client.

Having gained the Client's confidence, Brindley received additional scope, including developing demo packages, providing purchasing interface and construction support – all made easier by leveraging the thoroughly checked database used to develop the drawings mentioned above.

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