SIA DESIGN SERVICES

SMALL-SCALE PROJECT MANAGEMENT AND DESIGN SERVICES

SIA DESIGN SERVICES
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SUMMARY

This PDF was printed from SIA's website. It is intended to convey core competencies for SIA regarding a specific service. The service associated with this PDF is Data Management.

SIA offers 5 specific services:

- CAD Administration
- Database Management
- Task-Based Procedure Writing
- Software Presentations
- Piping Design Services

Refer to
www.siadenver.com
for more information!

DATABASE MANAGEMENT – WHAT IS IT?

Programs like CADWorx and AutoDesk Plant 3D are primarily database management programs. While these programs make drafting and designing easier, their primary advantage is being able to add and extract information from a project database. The data is represented different ways (P&ID, Piping Diagrams, ISO's), and the designer must link it together within the program in order to take full advantage of the time saving abilities of the program.

SIA's Database Management option is a Quality Assurance/Quality Control service for your heavily integrated projects. QA/QC is the combination of quality assurance (the process or set of processes used to measure and assure the quality of a product) and quality control (the process of matching products and services to consumer expectations). Shared data must be linked correctly throughout the project.

These programs make data easier to understand and utilize, so that your company can succeed in an ever-increasingly data driven world.

INCORRECTLY LINKED DATA OBJECTS IN DRAWINGS CREATE MANY PROBLEMS.

1. Disorganization in drawing (and deliverables)- The best presentation of your company's deliverables relies on organization. Members of your team frequently use drawing organization as a source of information. In addition to looking good on the sheet, organized documents ease future efforts to identify and gather information about the project. When an object is inserted into a drawing, but isn't linked together in another discipline, it is referred to as "orphaned". Some examples of easily orphaned objects likely showing up in a disorganized project are: P&ID Equipment, P&ID Off-Page Connectors, P&ID Process Lines, Piping Sections, and Valves.

2. Likelihood of repeat work – To use data-intensive programs correctly, all team members must understand and prepare for proper data entry of their objects. After an object (pump, valve, and/or equipment) has been placed by the designer and properly annotated/tagged in a project, the data is included in the project database. If the team member does not include pertinent data associated with their new object, a different, opposing discipline member may insert the same piece of equipment in their drawing and re-enter the data. This creates repeat work and added chaos in the project database. Correcting this misinformation, with it is time to create various deliverables, requires much work.

3. False picture of project status - Both management and clients are very interested in project progression. These programs enable easy generation of usable reports for accountability. When your team does not utilize aspects of these programs, a false picture of the team progression emerges. If a project is 30% complete, the database should be 30% built, as well. A robust database quickly generates deliverables such as: control valve list, equipment lists, instrumentation lists, nozzle lists, specialty item lists, process line list(s), etc.

NOTES:

"We're entering a new world, in which data may be more important than software." – Tim O'Reilly

DATABASE MANAGEMENT – WHAT SIA OFFERS

The problems associated with poor data management require every team member to be aware of their actions as the project continues. SIA's Database Management option examines the link between P&ID, Piping Drawings, and any other deliverables in order to account for all lines and objects on each sheet. SIA's methodology for mitigating these harmful effects of poor data management are highlighted below.

1. Locate Discrepancies in Project Database

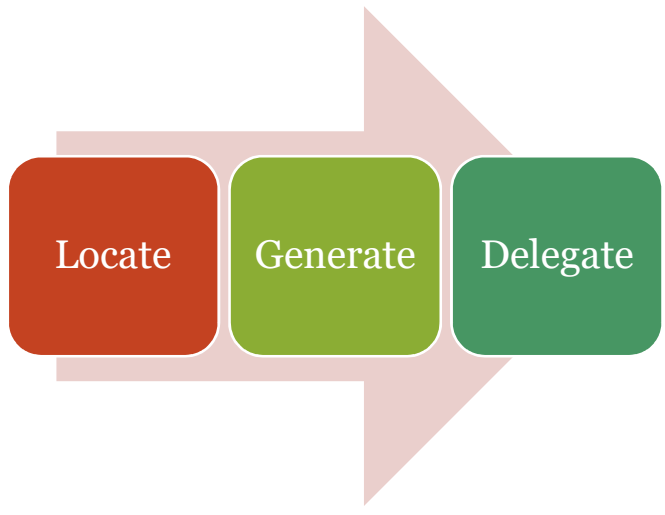
Locating the orphaned objects, disconnected pipelines, unassigned equipment, etc, is the first priority. This is done by SIA creating a validation report. SIA's validation reports can be created for specific drawings, specific disciplines, or for entire projects. SIA then creates a report highlighting all objects that need attention, this data can then be exported and organized.

2. Generate Specific Action Item Reports

Using the exported data, SIA generates user-specific reports based on who has designed that area. These reports highlight specific users who need to take action to correctly enter object data. These reports also compare and contrast existing redundant data within the database.

3. Delegate Action Items

These reports have the heading "Action Items – Project #." In the final step, SIA delegates the work to the appropriate team member. If two different team members have entered data about the same object, the report indicates that these two people should work together and resolve the repeat data. It is important that discipline-specific managers and lead designers are responsible for their projects' specific data objects. (I.E. P&ID team members are not responsible for data relating to items originally decided by the piping and/or structural team).



Contact Us

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SIA will partner with your company in the area of Database Management.
Contact us today and see how we can help.