CALL FOR PAPERS

Automation in Design and Documentation Conference

Digital System Documentation Processes for Construction and Engineering

Sydney, Australia – 18th & 19th November 2015

Do you work closely with engineering and construction documentation? We are looking for a number of presenters to submit an abstract and present their papers at this upcoming conference which has been developed to promote best practice and encourage development in this area.

This conference is all about catching the digital train so your business does not get left behind. Keeping pace with modern technological trends in engineering design is vital, and shifting from manual to digital is inevitable and can provide significant value to the Australian engineering industry.

Drawings are still seen as an integral aspect of the engineering process. Despite increasingly powerful computers, sophisticated new software, a multitude of digital tools, and 3D models being extensively used to help visualize components, buildings and other objects; many processes are almost the same as they were a century ago.

Documentation errors account for one of the most costly factors within the construction and engineering industries – contributing to delays and rework, loss of profit, reduced productivity, poor morale and expensive drawn-out disputes between contractors and the client. Alarmingly, research reveals that as many as 60% of variations in engineering projects are due to errors in poor quality documentation. There are numerous solutions to this problem such as system information modelling, which uses an object-oriented approach, allowing changes to be rapidly (and automatically) updated through thousands of objects in an error free manner. This can result in very substantial savings in the overall cost of the project. Further savings can then be realised throughout the complete lifecycle of the asset.

The first stage of “digitisation” is turning traditional engineering design into data, and transforming this information into new forms that add real value. This involves transforming manual processes in conventional drawing based engineering design to logical digital processes. This can maintain complete detailed “audit” histories of the design, and can help identify and eliminate risks early in the process providing greater control and predictability of price.
System documentation for complex modern control and electrical systems based on CAD drawings and lists are very expensive to create and increasingly inconsistent. Each document (cable block diagrams, termination drawings, loop drawings and a wide variety of associated documents) incorporates the same basic data; however there is no easy automated linkage between all the objects. This means change and revision control is extraordinarily time consuming and expensive. Alternatives, using advanced modelling techniques, must therefore be sought.

This conference will cover modern documentation and design techniques used in engineering, and the software tools that can be used in the design, construction and maintenance of the systems that are an integral part of these plants and assets. These tools can help make design independent of traditional forms of drawings and documents, and can significantly improve accuracy and efficiency by eliminating paperwork and reducing the need to manage documents.

The benefits of virtualisation will also be covered, as creating a virtual version of your design can assist with data sharing and technical understanding between staff and clients, particularly when dealing with remote sites or overseas clients. The conference will also discuss problems that arise from using traditional engineering design techniques and how industry can overcome these issues by utilising digital design techniques and appropriate flexible software solutions.

We are seeking speakers who will talk about their real experiences in the field with digital engineering design. We are particularly interested in case studies and state-of-the-art best practice. The goal of this conference is to help the industry move towards the digital age of design and provide participants with hard-hitting, useful industry knowledge they can directly apply in their workplaces.

Suggested Topics:
- Digitising system documentation and document flows
- Engineering design: 2D vs. 3D vs. modelling
- Modern and intelligent documentation techniques
- Collaboration and sharing of models between consultants, contractors and clients
- Electronic documentation to reduce document storage, archiving, auditing and control
- Virtualisation
- Plant and layout design
- HV substation design, plant design, mine site design
- Knowledge management vs. document management
- GIS
- Industrial automation
- Electronic documents and workflow
- CAD drawings: the positives and negatives
- Smart building design (BIM and SIM)
- Digital signatures and document security
- Digital prototyping technology
- Digital engineering archives
- Paperless electrical design, review and construction
- End-user technician training and model integrity
- Control system modelling – termination drawings, instrument lists, data sheets and cable schedules, instrument indexes
- Maintenance management strategies using 3D modelling
- Digitisation of manual processes

All Submissions Welcome
IDC Technologies’ conferences are emphatically not aimed at allowing vendors to “sell” their products, but rather on practical applications and solutions – probably the best way to showcase your technologies and engineering skills.

What is required from you?

- A **100 word abstract**, which outlines the topic you would like to present. This needs to be submitted electronically as soon as possible, to secure your place.
- Once your topic is approved, your **technical paper and PowerPoint slides** will be due six weeks prior to the event.
- Speaking slots are allocated on topic suitability and on a first come first served basis, so please register your interest today by emailing sarah.montgomery@idc-online.com

For further information on this event or to discuss sponsorship opportunities contact:

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