

Cable Management Product Update

Synchronised publication of cable design data for use in separate CMPIC installation system

CMPIC cable management software is used to manage the design and subsequent installation of cables on large engineering projects such as ships, submarines, power plants etc.

In situations where design and installation are not carried out by the same company, there may be a need to provide design data to an installation sub-contractor who can then use that data to plan and install the cables.

It is to answer these needs that we have developed the Transmittals Process.

The Transmittals Process has been developed to cater for the following situations:

- Where the Design authority for the project is not the same as the Installation authority.
- Where it would be beneficial to the project if Design and Installation could be synchronised, even though the two authorities' systems are separate.
- Where Installation is subcontracted by the EPC project management company but overall project control needs to be retained. There could be one or more subcontractors installing cables.

In many cases, the information provided by a design authority to the installation contractor consists of cable pull sheets and drawings. These may have supporting spreadsheet files.

The problems with this approach are:

- The data provided by design then has to be managed by installation; this is often done by re-inputting the design data into an installation-only system or by using a paper-based system.
- Ongoing updates by design to installation are difficult to manage when changes to cables are required. A design change would be communicated to installation using the same methods as the original submission. This process can be slow and error prone.
- From the total project management point of view, it is difficult to derive a consolidated view of where cables are in the lifecycle between design and installation.

In an ideal world, the Design and Installation authorities would share a single integrated CMPIC database. Where this not possible, Cloudis have overcome these problems by developing a Transmittals process through which data from the CMPIC Design database can be published to a CMPIC Production database, managed completely separately from Design.

The Design CMPIC system is managed by the Design Authority where the initial scheduling and routing of cables is done. Any changes required to cable routes or other cable details are also carried out in the Design database.

The Production CMPIC system is separately managed by the Installation Contractor. This database receives cable design data (as cable routes and other associated information) published by the Design Authority and then manages this through the production phase.

Since these two databases are entirely separate, we use the Transmittals process to manage the transfer of cable design data from design to production to ensure that the two databases are fully synchronised. This means that installation has an up to date copy of the cable design data, which can then be used to plan and manage their work. The synchronisation also ensures that cables which are going through change control are identified to the installation contractor as soon as possible, thereby reducing unnecessary work. This involves, as part of the Transmittals Process, automatically setting a 'Stop Work' flag on any cables undergoing design change which production has already planned for installation.

Transmittals are produced automatically by CMPIC and only include newly approved cables and those which have already had a pull sheet printed in the past and which are now going through, or have been through, the change control process. The process creates a file which can then be loaded by the installation company into their own CMPIC system.

The benefits of this approach are:

- The Transmittals Process effectively enables CMPIC’s entire suite of functionality to be used, even though design and production are not using the same database. Decision making and problem identification are therefore accelerated, potentially saving both time and money.
- Installation need not waste time and effort planning and installing cables which have been identified as requiring change. Early warnings mean that installation can cease work before cables are unnecessarily ordered, cut or worst case, actually installed.
- There is no need to transfer or re-enter data between different systems with the inevitable time delay and errors which this causes.
- The Publication and Loading of Transmittals need not be carried out by an engineer. The procedure is an administrative one and could just as easily be carried out by an IT or administrative person with access to the relevant CMPIC screens.

