



CopyMoveRotate – copy, move and rotate Intergraph® PDS® models

Introduction:

CopyMoveRotate allows users to copy, move, rotate or mirror a section, or even an entire PDS model quickly and simply saving around 90% of the man-hours over using traditional methods.

Common issues:

Most engineering projects require some level of replication of model sections, especially when the process plant has multiple trains.

Traditionally, the copying and movement of model sections is not a difficult process in itself, however, the copied items need to be renamed with their correct tag number. This is typically an interactive exercise within the design system and can be very time consuming. Also other attributes such as “train number” or “system” or “area” etc. may also need to be modified.

Because of the time taken to replicate a model section, it usually makes more sense to fully complete the design before copying it and changing the attribute values. The disadvantages to taking this approach are...

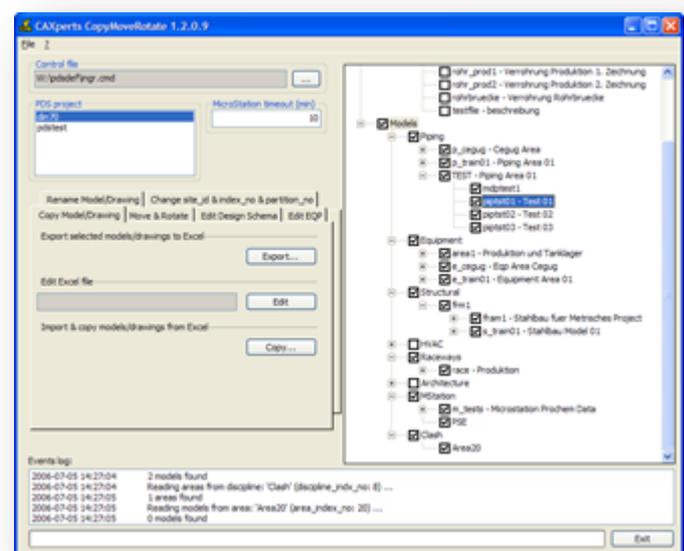
- A bill of materials cannot be easily produced that shows the rolled up material quantities making it more difficult to pre-order bulk materials early on.
- The model will visually look less complete from a design point of view unless the replicated sections are included. To do this traditionally and regularly as the project progresses will significantly increase the overall design man-hours

CopyMoveRotate addresses the above issues and provides a simple, yet powerful method to copy, move, rotate and mirror sections and is so efficient that it can be used to replicate sections on a daily basis if required.

Significant man-hour savings:

Engineers and designers are very familiar with Microsoft Excel and it is used widely across the engineering project. **CopyMoveRotate** uses this environment to define the components to be transformed as it provides a very efficient mechanism for quickly copying PDS models and drawings.

The interface is very user friendly and can be applied to copy and move small sections of a model or an entire project without limitations on the size.



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Traditionally, copying model sections and retagging the items can take several months. Most users of **CopyMoveRotate** have reported man-hour savings of around 90% meaning that the system provides an immediate return on investment (ROI) even on a single project.

Simple setup:

When moving a model, only the distance to be moved has to be defined. For rotations, only a pivot point and angle is needed. All selected models will be moved to the desired location based on these values. In addition to an extensive reporting the processed models will be colour tagged. In case of an access problem (locked or broken model) the model will be skipped and reported after the selected time-out period has elapsed.

Non-PDS models:

CopyMoveRotate can also be applied to MicroStation® models which are not included in a PDS project. These models can be loaded into a list simply by drag & drop.

Support for desired work flows:

CopyMoveRotate is simple to setup and quick to execute. For these reasons, workflows can be introduced into the engineering project that traditionally would not have been possible.

For example, design work can be progressing on a single train and **CopyMoveRotate** can replicate the design for the additional trains using the batch processing facility on a regular basis. Not only can a more accurate bill of materials be produced, but the other sections of the model are fully available for design review and drawing production with minimal effort.

Consolidation of attributes:

Copied models will need a change of attributes (line ID, EQP name,...). For piping, a set of attributes of the data to change can be freely defined and exported to Excel. In Excel, the attributes can be changed and reloaded into the project.

In the same manner the attributes for every equipment item in the design files can be verified and — if applicable — changed, this saves many man-hours of effort.

Benefits:

- The most significant benefit that **CopyMoveRotate** delivers is that of man-hour savings. Typically 90% of the man-hours are saved when compared against a traditional approach.
- PDS data verification and modification is possible, also saving many man-hours.
- New workflows are possible due to the speed at which models can be copied, transformed and retagged.

Next steps:

If you believe that **CopyMoveRotate** may be of value to your organisation, please contact your nearest CAXperts office for further information. We will be happy to provide more detailed information and discuss your individual requirements in more depth.

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