

Recommended Tag Formats

Introduction

Audience: Administrators responsible for setting up P&ID projects and tag formats

The goal for any tagging scheme is to have tags update to reflect changes made to component properties during the lifecycle of a project. This paper explains how the following guidelines can help you set up tag formats to achieve that goal:

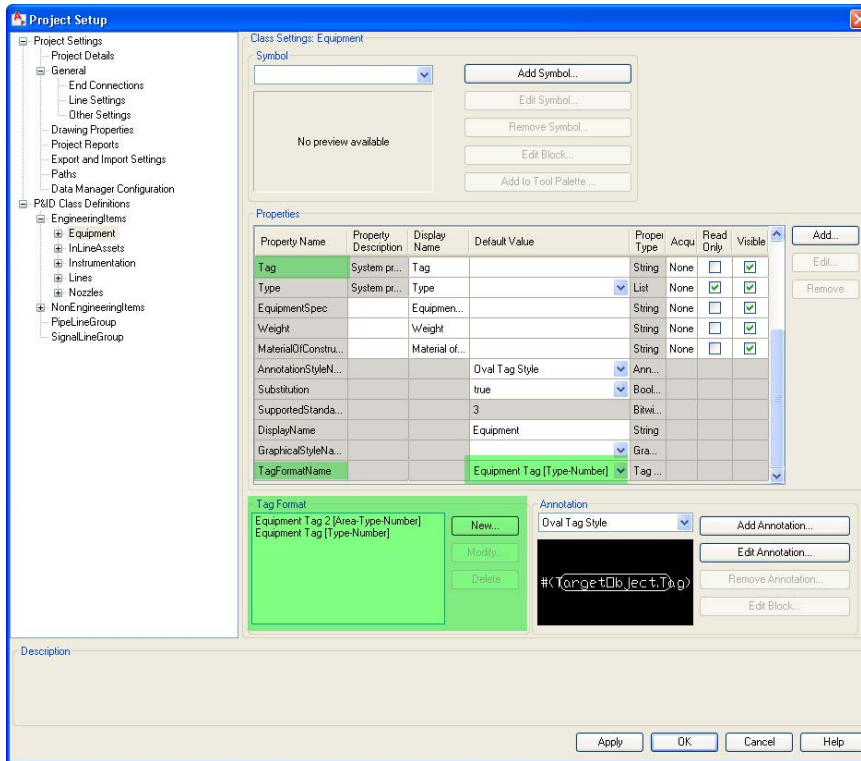
- Define tag formatting in the Project Setup dialog box.
- Define delimiters appropriately.
- If possible, define tag formats at the start of a project, before drafters begin tagging components.
- Set up properties for all parts of tags, adding new properties, if necessary.
- Use expressions with properties to further define a tag part.
- When using drawing or project properties, add new acquisition properties to your components before setting up the tag.

Define tag formatting in the Project Setup dialog box

Every plant uses a naming mechanism to identify or tag components and lines. Usually different types of components have different tag formats. Tagging conventions and formats vary from plant to plant.

In the AutoCAD P&ID Project Setup dialog box, you can customize the tag formats required for each class of component. The two properties that define tagging are *Tag* and *TagFormatName*. Components that are commonly tagged, such as equipment, pipe lines, and valves, have these properties already defined by default. You can add the property *Tag* to any component class to enable tagging of that component. Adding the *Tag* property automatically adds *TagFormatName*.

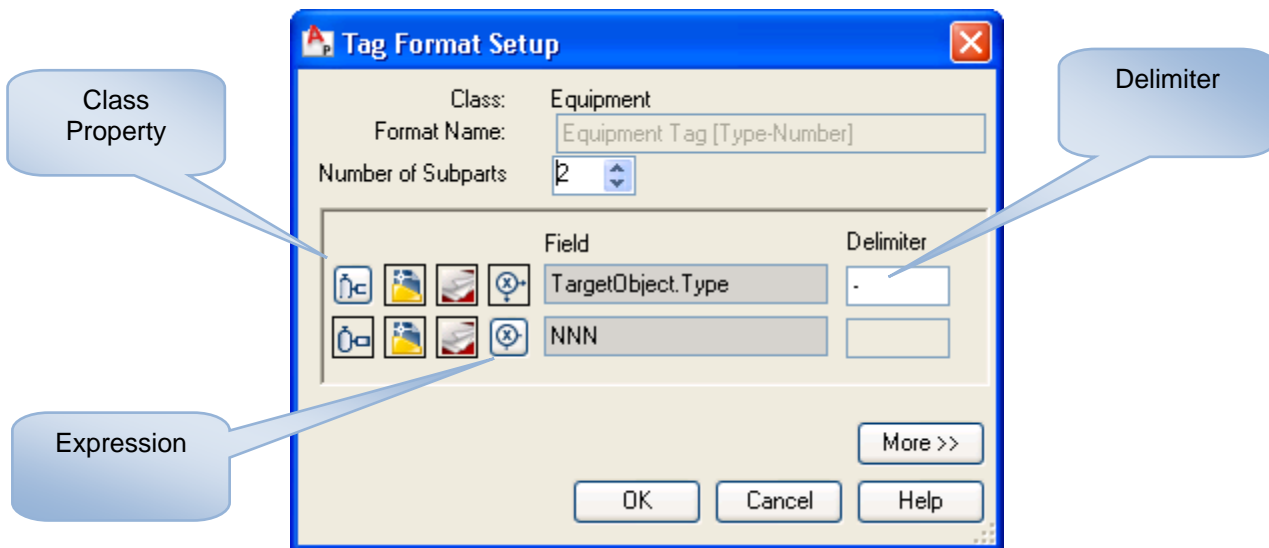
The following illustration shows how tags are formatted for equipment in AutoCAD P&ID.



Under Tag Format is a list of all available tag formats for a particular class of component. You can add new tag formats or customize existing ones. Only one format can be used at a time, and this format is defined by the *TagFormatName* property.

Understand the significance of delimiters

You define tag formats in the Tag Format Setup dialog box. Tags can include properties, expressions, and delimiters. The following illustration shows a simple equipment tag that consists of two parts, *Type* and *Number*. These two parts are separated by a delimiter, a dash (-).



Equipment type is defined by a property called *Type*, and number is defined by the expression *NNN*. You configure these parts of the tag by clicking the Class Property and Expression icons shown in the previous illustration.

Expressions can be used alone (as in the example shown previously) or with properties. When expressions are used alone, the value of the expression is stored only in the tag property value along with other subpart values as a concatenated string.

For example, in the tag P-101, P is the type and 101 the number. P-101 is stored as a string value in the tag property. P is also stored as a string value in the *Type* property. The delimiter character splits the entire tag string into its subparts.

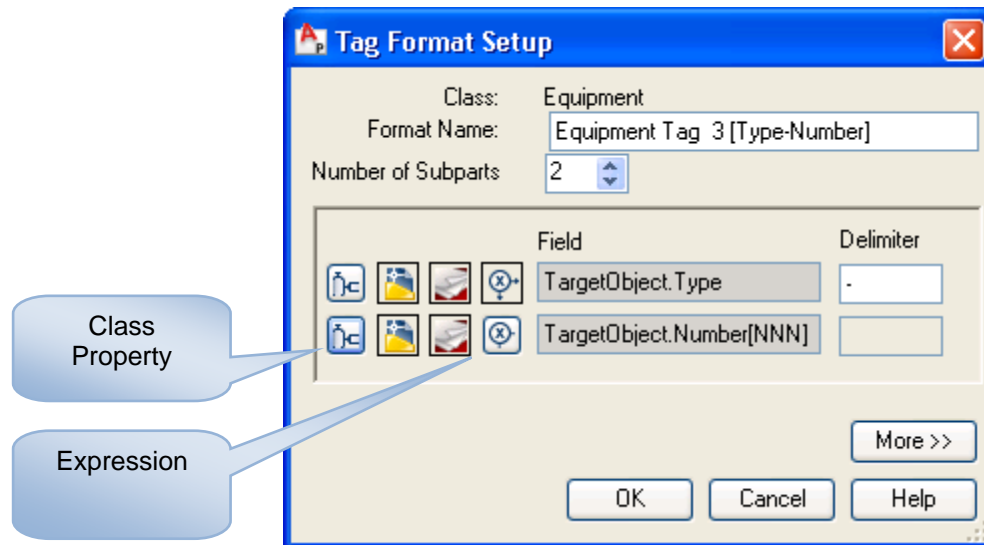
Appropriately defined delimiters are important. Do not enter a delimiter manually inside the property value (for example, by typing P-M for the *Type* value). Manual entry may cause errors because the program may treat a user-entered dash (-) as a delimiter to split the string to its subparts.

When a subpart of a tag format uses an expression without a property (expression *NNN* in the previous illustration), it is strongly recommended that you do not change the tag format during the project. Changing the format may cause errors in the existing tags, and you might have to reenter the tags.

Define properties for all tag subparts

The issues described in the previous section can be avoided by making sure all tag parts are defined as properties of the object being tagged. You can modify the equipment tag format shown previously to avoid possible errors and inconsistencies. In the following example, the second part of the tag uses a property called *Number* with the expression.

For information about how to add properties to classes, see “Set Up Properties” in the AutoCAD P&ID User’s Guide.

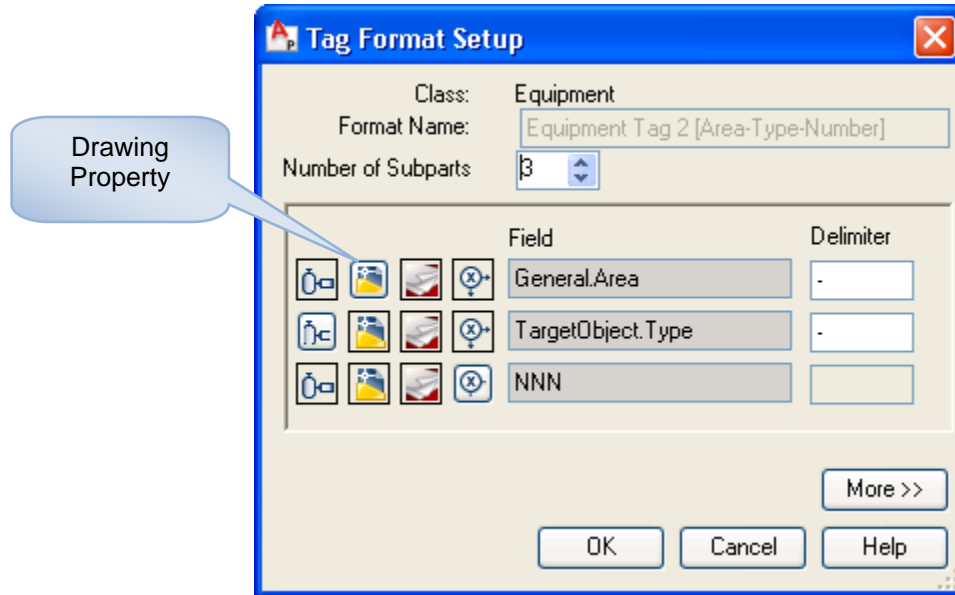


In the definition of the second part, notice that the definition includes both a property and an expression. Because all parts of the tag are stored in properties, tags can be reconstructed anytime from the property values. Tags created in this manner work well even in the following situations:

- Delimiters are inside property values.
- Delimiters are not required or are blanked out.
- You want to change the tag format during the project after entering a few tags in the drawings, and you do not want to reenter the tags.

Define acquisition rules for tags containing project or drawing properties

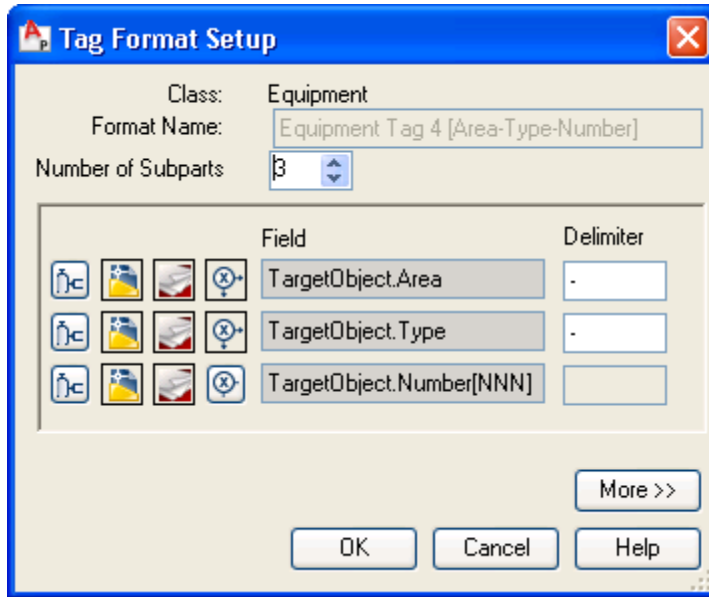
If the tags you are defining contain drawing or project properties, you can define property acquisition rules to make sure the tags update properly. In the following illustration, the equipment tag contains a drawing property (Area). In AutoCAD P&ID, drawing property values are used only when a tag value is initialized. If you edit the tag to change the drawing property value, the modified value is stored locally in the tag property and does not change the source drawing property. If you change the drawing property at a later date, the drawing property value inside the tag for all components that are already placed in drawings remains unchanged.



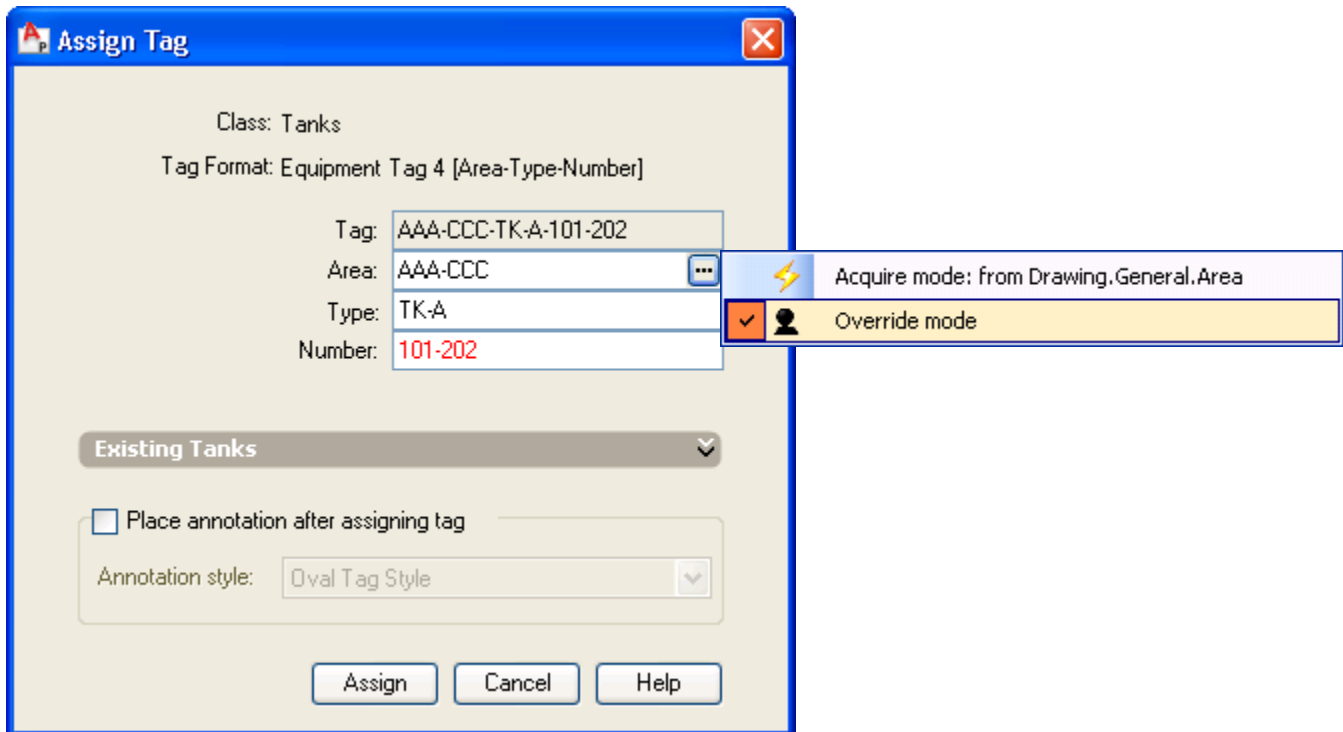
If you want all tags that refer to a drawing property to update when changes are made to that property, set up an acquiring property for the component.

For information about how to set up acquiring properties, see “Set Up Property Acquisition” in the AutoCAD P&ID User’s Guide.

In the modified tag format shown in the following illustration, a new equipment property called Area, which acquires its values from Drawing.General.Area, is defined in the first part of the tag.



Because Area is an acquiring property for equipment, any time the drawing property Area is changed, the equipment property is also changed, and the tag is updated with the latest Area value. If you want to override the Area value for certain components, you can change from Acquire mode to Override mode, as shown in the following illustration.



When you switch to Override mode, the equipment property Area is detached from its parent drawing property and you can type any value that is required.

Summary

AutoCAD P&ID provides versatile tag formatting capabilities. It is strongly recommended that all tag subparts are stored in separate property values for the best results.



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