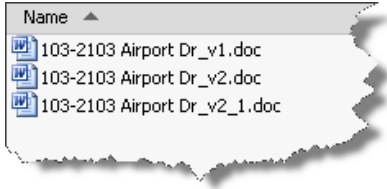


Version Vs Revision

When creating data there are times when you need to maintain a history of the document to see what has changed over the evolution of the document and why it was changed. Maintaining the history of the document provides the ability to go back to a previous copy when something was changed inadvertently or the change did not make improvements compared to how it was previously. In some instances you may want to go back to a previous copy to be able to work on the exact version that was provided to a customer or vendor.



At the simplest level you could keep multiple copies of a document, labeled in a fashion to identify versions and / or revisions. The file would be labeled with the appropriate version or revision #.

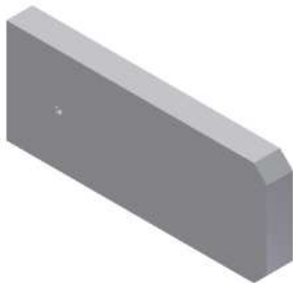
The issue with using multiple copies of a document is that it requires self-discipline to properly maintain the copies, which could lead to mistakes.

Versions

A version can be seen as an iteration of a document, like having multiple backup files.

In software development a version is seen as an intermediate software update that typically addresses issues in the original release but is not seen as a major release of the software.

In the engineering world versions can be seen as a copy of the file that is different from the previous version but the changes do not represent functional changes of the design that might affect the form, fit, or function. Versions are used to keep the previous designs incase new ideas do not work or do not improve the design or for the instances where multiple concepts are presented and the selected concept will not be known until later.



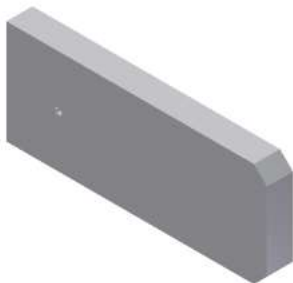
The initial design "Part.ipt"



Design Evolution..."Part_V2.ipt"



Design Evolution..."Part_V3.ipt"



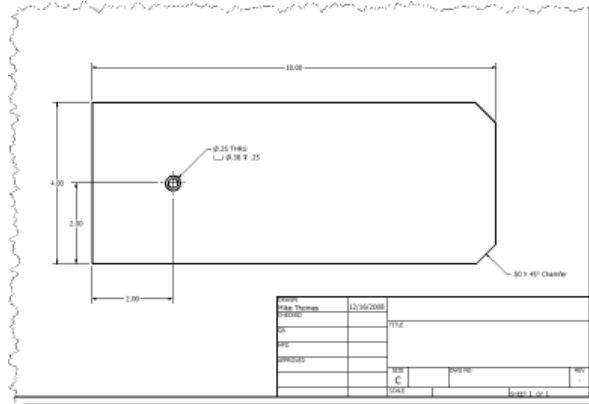
The restoration of a version

In the shown example a component is created but, as the final outcome is unknown, each modification is maintained as a new version of the file. If the files are labeled correctly with the version number, previous versions can be easily restored if an early design is deemed more appropriate. The other version files may be removed or the previous version may be copied to become the latest version.

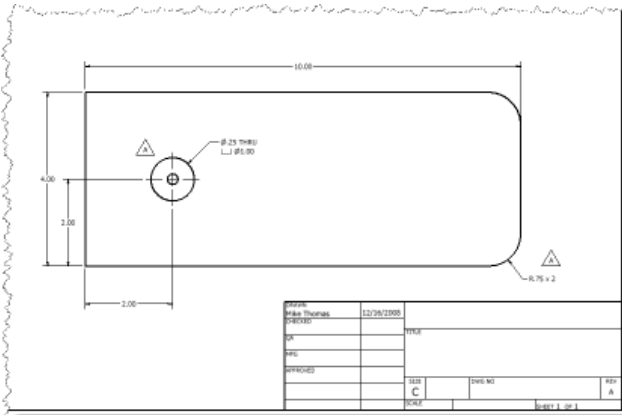
Revisions

Webster’s dictionary describes a “revision” as *the act of revising*, which is to *make a new, amended, improved, or up-to-date version*.

In software development a revision is seen as a major release of the software that will introduce new features and functionality to the application. In the engineering world revisions are done to show changes to a design so that the changes are documented for the entire design team and any other individual who uses the data.

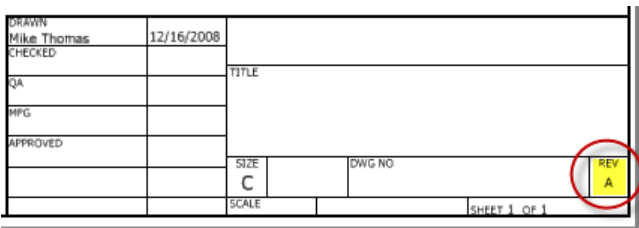


The initial release to manufacturing



The revised drawing

A revision will typically be created when modifications are done after the data has been released. In most cases the revision represents a modification to the document such that the document or design remains interchangeable with the previous revision. Likewise, if the modification changes the data so that it is no longer interchangeable with the previous revision, a new file will be created.



The revised drawing

Revisions will be identified by incrementing the documents associated revision number or letter.

Autodesk Data Management

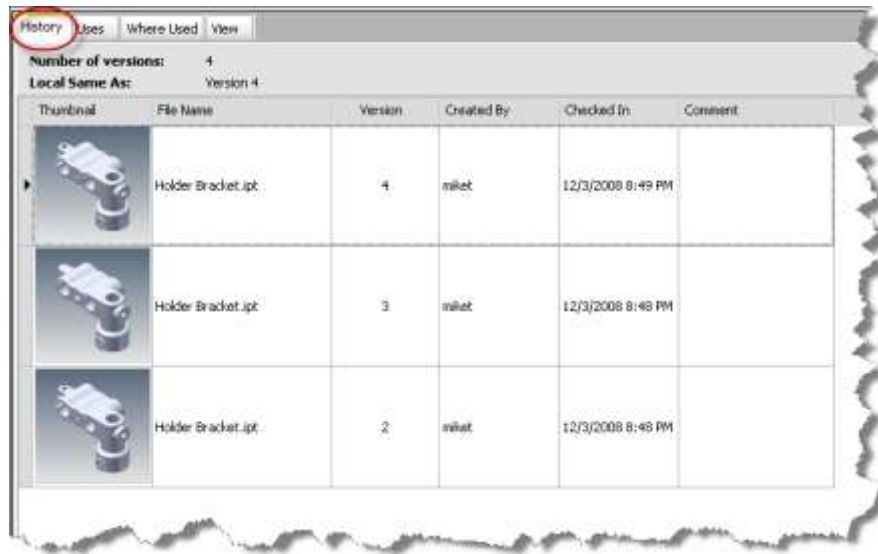
So how can Autodesk Data Management help?

As stated above, one of the simplest methods to maintain revisions is to add the revision number to the filename of the document. With CAD the drawing may be saved or exported to a different format, like pdf or raster image (jpg, tiff, etc) to provide a static, unchanging copy of the previous revision of the drawing.

These processes will provide the ability to use a previous revision of the document and provides documentation on the changes to the document. However as this is a manual process it is up to you to generate the copy of the document and properly rename the file to include the revision number. With any manual process there is always the possibility of forgetting or not doing it properly, so what happens if you forget?

Work-in-process (WIP) management = Autodesk Vault

Autodesk Vault makes it easy to track and locate current versions of a design and helps CAD users manage data organization and protection of the design data from inadvertent changes. Autodesk Vault maintains previous versions of any file checked-into the Vault. These previous versions can be restored to the current version at any time restoring an early version of the file.

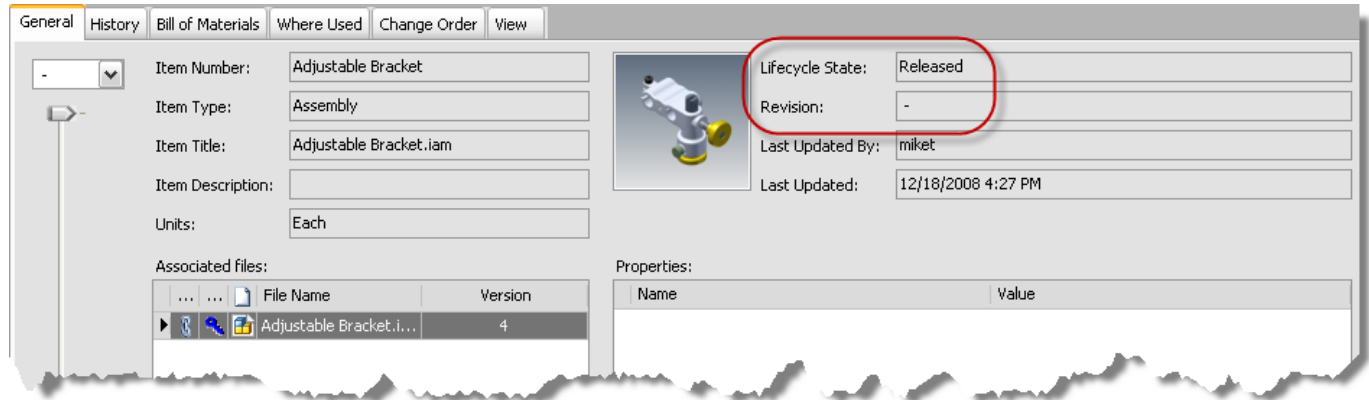


Version (History) Management within Autodesk Vault

BENEFIT: Using Vault means versions are maintained automatically meaning no manual copying and renaming of files AND previous versions can be restored to the current version at any time.

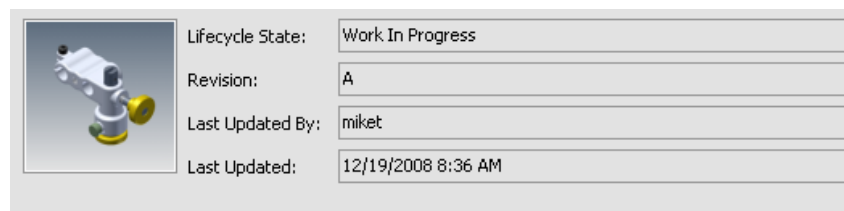
Release Management = Autodesk Productstream

Using Autodesk Productstream creates a “digital pipeline” connecting all stakeholders involved in the manufacturing process providing collaboration between everyone involved, from concept to production. Productstream provides tools for design review, Bills of Materials (BOM) management, and introduces workflows for design release and change management.



Initial released item

Within Productstream documents will not become “visible” to downstream users (eg. shop floor, sales, and marketing) until after the document has been released. To make a change to a released document the document must first be moved back to “work-in-progress” which automatically increments the revision number. This revision control ensures everyone is working on the correct design and the built-in audit trails will show what has changed.



Item is set to “Work In Progress” to make modifications and the revision is automatically “bumped”

BENEFIT: Automatic revision management and revision numbering. Documents can not be changed unless moved back to WIP and if moved back to WIP the revision number is automatically “upped” meaning you do not have to worry about working on an incorrect revision of the document

About the Author: Mike Thomas

Mike is an Application Specialist, specializing in the manufacturing industry. Mike provides training, support, and implementation on many of the Autodesk manufacturing and data management solutions, as well as AutoCAD. His Autodesk mechanical knowledge is supplemented with a good understanding of other Autodesk technologies, document management, hardware and networking. Mike is PSE and ATC certified and was one of the first to complete IMAGINiT’s TakeAIM certification. With over 10-years of Autodesk software experience and his strong communication skills, he is highly regarded within the industry.



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