

CATIA V4 to V5 Migration & Interoperability

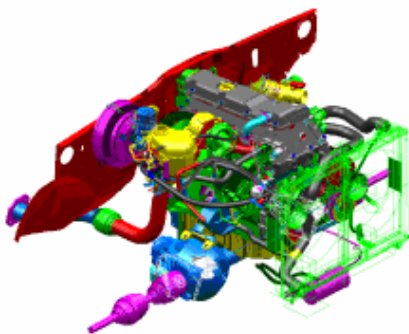


With CATIA V5 now well established, many companies are looking to make the transition from CATIA V4. But what problems lie in wait, and can anything be done to minimise disruption and ensure a smooth transition?

Most companies with CATIA V4 will have legacy data to maintain, and on-going projects that will need to co-exist with any new V5 rollout. CATIA V5 can read, review and work with V4 data (including drawings), without the need to perform any conversion. So if you have a vast collection of V4 parts that are never going to be modified, there is no need to convert them to V5 format since the tools for working with V4 models in V5 are well developed and very reliable.

THE USERS PERSPECTIVE

Using native V4 parts in an assembly is much like using a V5 part, with measure and assembly functionality fully supported. The difference comes when you want to add geometry to the V4 part, perhaps to help assemble it? This cannot be done as the V4 part is read-only in this context. If you want to modify the V4 part, it first needs to be converted to V5 format.



Unlike V4, CATIA V5 model files and their associated drawings can only be stored in separate documents. This has consequences in transition, with the link between a 3D model and its drawing being broken and in need of reconciliation after conversion to V5.

Migrating V4 parts to V5 can be done

in batch or interactive modes, and you can choose if you want the resulting V5 part(s) to be built with or without a V5 history tree ("AS SPEC" and "AS RESULT" translation, respectively).

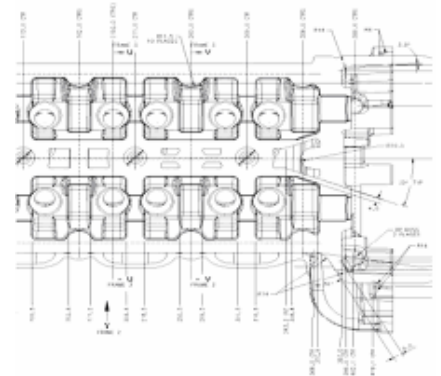
Success with "AS RESULT" translation is almost guaranteed. The resulting geometry, although lacking history, can be worked on (filleted, cut, added to, etc.) or used in Boolean operations with other bodies, just like any other V5 geometry.

Automatic "AS SPEC" translation is generally successful, but a degree of user intervention may be required depending on the quality and complexity of the V4 data. Such intervention is usually straightforward (e.g. replacing a missing edge reference for a fillet), but why should it ever be necessary?

It is important to understand that CATIA V5 works to a much 'finer' tolerance than V4. In practise, this means that V4 ignores small modelling inaccuracies, which only become evident when they are regenerated in the more discerning V5 format. The key to a successful transition therefore, lies in ensuring your V4 models are of good quality.

V5 CHECKING TOOLS

CATIA V5 comes with tools to check V4 models before migration. It is possible to view the CSG tree, and run automatic checks to ensure there are no obvious data problems. Note that older functions in V4 (such as DIMENS, rather than DIMENS2) may not be supported for V4-V5 translation, so using these checks to highlight the presence of data created with such functions can save a lot of head-scratching.



SUMMARY

Every company will have its own individual requirements for V4-V5 transition, and they may initially appear quite daunting. With informed guidance from people with experience in the field, an appropriate balance between speed, interoperability, cost and level of migration can be reached. As with many things, the transition to V5 is rarely as frightening as it first appears.

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