

Siemens Wins Big: Hyundai KIA Motors Swaps Out CATIA and Windchill In Favor of Siemens Xcelerator

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Things are starting to move significantly on CAD and PLM/cPDM among the major automotive OEMs. As recently as last month, the truck, bus and construction machinery manufacturer Volvo Group reported that they had chosen to consolidate product development on PTC's CAD platform Creo and phase out CATIA V5, in a deal that also included a transition to PTC's PLM/PDM platform Windchill.

Today, engineering.com can reveal a new deal in the automotive field that was announced as part of Siemens' FY 2021 earnings call.

The announcement is that the world's fifth largest automotive group, South Korean Hyundai KIA Motors (HKMC) has selected solutions from Siemens Digital Industries Software's PLM portfolio, Xcelerator. These will replace the incumbent solutions, switching from CATIA to Siemens' NX for CAD and from Windchill to Siemens' PLM suite Teamcenter for PDM. Moreover, HKMC uses PTC's CAD solution Creo in powertrain design, which will also be replaced by NX.

No deeper details about the deal were revealed, but based on the information available so far, my interpretation is that this is an unusually large deal in the automotive area. As HKMC currently works in Dassault (CAD) and PTC (PLM/PDM/CAD) environments, this would mean that Dassault Systèmes' CATIA V5 and PTC's Windchill and Creo solutions lose a large customer as the old solutions are phased out.

Generally, we are also talking about what can be very large investments. According to my qualified calculations, in total this deal might include as many as 3,000 to 4,000 licenses on the CAD side, and as many as up to 10,000 licenses of the PLM suite Teamcenter. A "street value" calculation indicates the deal could be worth as much as a total of \$30 to 40 million.



A Huge PLM Bet. The world's fifth largest automotive group, South Korean Hyundai KIA Motors (HKMC) has selected solutions from Siemens' Xcelerator for next generation PLM, replacing incumbent solutions by switching from CATIA to NX for CAD and from Windchill to Siemens' PLM suite Teamcenter for PDM.

A Static Market on The Move

CAD system swaps, as well as PLM/PDM system switches, are one of the rarities among major automotive OEM users. Over time the market has been a fairly static story, with OEMs generally using one of the three major solutions: CATIA from Dassault Systèmes, NX from Siemens Digital Industries Software or Creo from PTC, with minimal movement between manufacturers' CAD arsenals.

But this may change in light of the automotive industry's transformation towards eMobility, platformization, online connections and software control. Where previously mainly mechanics and certain electronics dominated as domains in product development, a clear and strong movement towards electromechanics, sensors and software as dominant elements can be observed. Another interesting trend is that companies generally are looking at connecting product development closer and more seamlessly to manufacturing. This in turn makes solutions that have a “natural” built-in compatibility and supporting platform capabilities between these areas more interesting, of which Siemens Digital Industries Xcelerator is maybe today's clearest example.

One interesting effect of this is that developers are not just looking at, but have also started to act upon, the next generation of CAD and PLM solutions. This trend can be seen as the backdrop to today's investment from the HKMC Group.

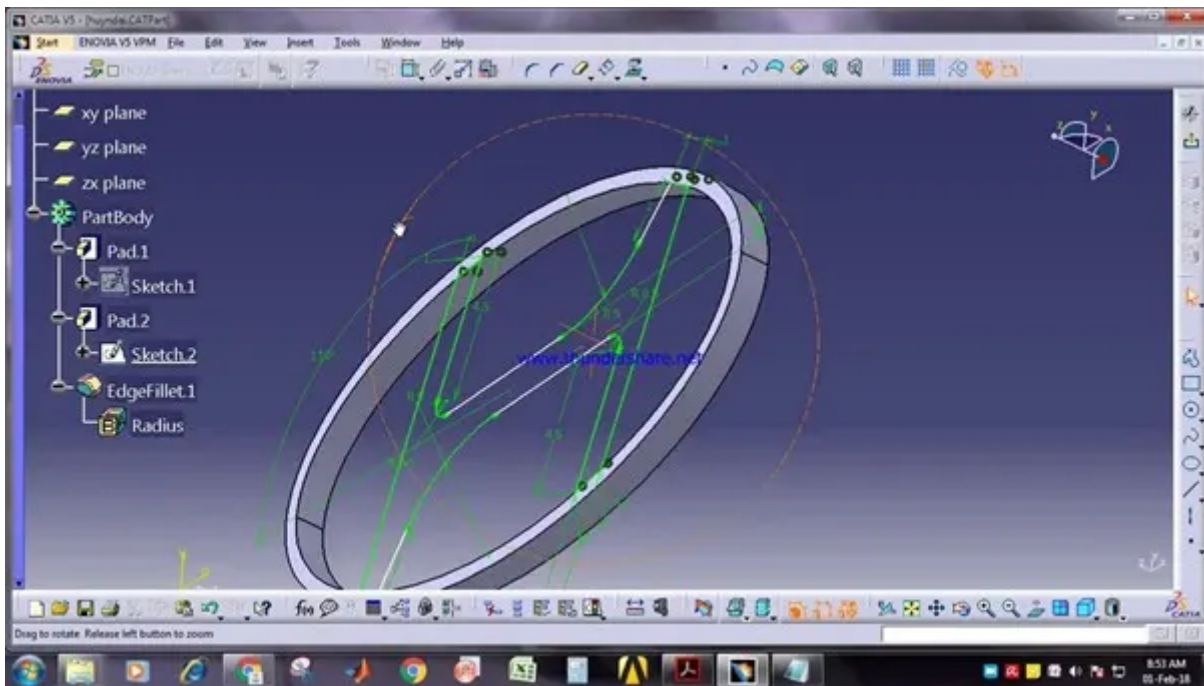
Daimler-Mercedes Bet on NX CAD

In terms of size, CATIA has been the most common CAD software in the automotive industry. But in recent years, things have started to move with the Daimler-Mercedes Group's big change from CATIA V5 to Siemens' NX CAD around 2015 as the most eye-catching event. This involved more than 7,000 CATIA users, who were transferred to Siemens NX.

What primarily decided the change was that Daimler-Mercedes did not want to switch to Dassault's then relatively newly developed V6 platform, 3DEXPERIENCE. Above all, it was the problem that buyers and users of the system were required to invest in ENOVIA as a PDM solution for it to work as intended. Thus, Daimler-Mercedes had to use two parallel PDM systems, since Siemens Teamcenter was already being used as a data backbone. The German vehicle giant didn't want two PDM systems, which was a core reason for why they decided on a change. The swap to the new platform was done in a record short time, about 16 months.

Other major changes include Fiat-Chrysler's consolidation on Siemens NX in connection with Fiat's acquisition of Chrysler. This case was also about a transition from CATIA V5 to NX CAD. This time the number of CAD licenses was over 1,000.

The most recent major deal in the area, as mentioned earlier, last month's consolidation of CAD at the truck, bus and construction machine manufacturer Volvo Group, which is also phasing out CATIA V5. This time, however, it was PTC and Creo who took home the pot.



Hyundai's logo designed in CATIA V5.

Phase Out of CATIA V5 is a Common Denominator

Taken together, in all these cases, Dassault Systèmes—and above all, CATIA V5—seems to be the big loser when automotive companies switch to the next generation of CAD and cPDM solutions. Above all, it is difficult to establish Dassault's upgraded V6 platform 3DEXPERIENCE, which has been the common denominator behind the changes.

In most cases, the stumbling block is the problems that come with starting to use CATIA V6 (3DEXPERIENCE). The discrepancies between the the V5 and V6 systems were so great from the beginning that Dassault eventually chose to introduce mixed V5/V6 solutions that included bridges between the different system versions to make it all work better.

Problems with the cPDM solution ENOVIA have also been a concern, as in one case they worked file-based (V5), while the V6 version is based on an aggregated data solution.

In a follow-up article, we will take a closer look at these differences and how the matter has been handled within Dassault Systèmes.

We should also note that there are positive examples of an upgrade from V5 to V6 as well. Perhaps the foremost example is the Swedish monster sports car developer Koenigegg's recent transition with Dassault's partner TECHNIA as implementer.



Hyundai KIA employees developing online system solution.

CAD and PLM/cPDM at HKMC

CATIA was among the first 3D systems to hit the market, and is the solution that many automotive companies worked with for a long time, which meant being largely dependent on Dassault Systèmes. This means that several automotive companies have often worked for decades in this system. For a long time, it was the V4 version that mattered; and V4 is still in use to a smaller extent, but in general most people work with the V5 version or mixed V5/V6-versions.

On the part of Hyundai KIA Motors, CATIA has been used for almost 40 years—since version 1. The investment in PTC's Windchill took place later; I have seen a press release on the matter from 2011. As far as CATIA is concerned, the solution within the South Korean group has been used for things such as body & white, wheel suspension and other things.

We should also note that today's deal means PTC is losing a major user on the CAD side, where HKMC used PTC's Creo for powertrain design.

But as it looks now, the next generation system will be Siemens NX in combination with the PLM/cPDM Teamcenter solution.

It's a big win for Siemens, whose previous footprint at HKMC was primarily through the simulation and analysis tool Simcenter STAR-CCM+.