

# ***NX CAD/CAM AUTOMATION***

---

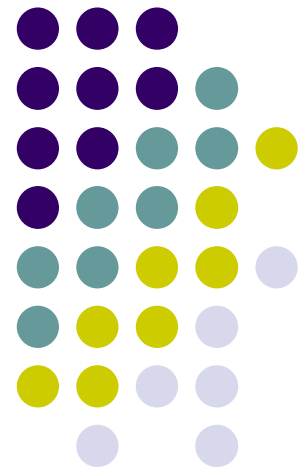
Presented

By

James

**NX CAD CAM Automation Service (NCCAS)**

Email: [support@nxcadcam.com](mailto:support@nxcadcam.com) Web: [www.nxcadcam.com](http://www.nxcadcam.com)





# About **NCCAS**

---

**NCCAS** (NX CAD CAM Automation Service) is a group of Unigraphics CAD/CAM experts, who have many years' experience in NX CAD/CAM software customization/Implementation/Support, as well as hands-on engineering background in Aerospace, Oil & Gas, Medical equipment and Semiconductor industries. We provide complete CAD/CAM solutions for our customers all over the world with excellent customer service.

**Our mission** is to provide our customers with the world-class CAD/CAM Services, and help them to speed up the design process, reduce the time to market, reduce the cost and keep the competitive advantages.



# NCCAS Services

---

- NX CAD Automation
- NX Draft Automation
- NX CAM Automation
- NX Postprocessor Development
- Global CNC Machining Service



# NCCAS NX CAD Automation



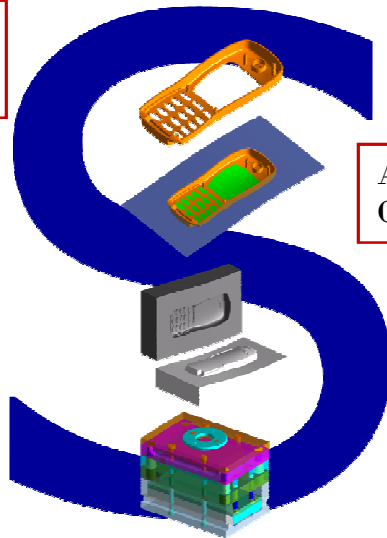
Develop handy tools for designer to avoid time-consuming repetitive task; Standardize the best practice of design process; Generally, CAD Automation can help companies to save their design time by 30~80%, reduce the time to market and cost.

## Example: Quick Mould Automation

Automatic Parting Surface generation

Automatic Core/Cavity Generation

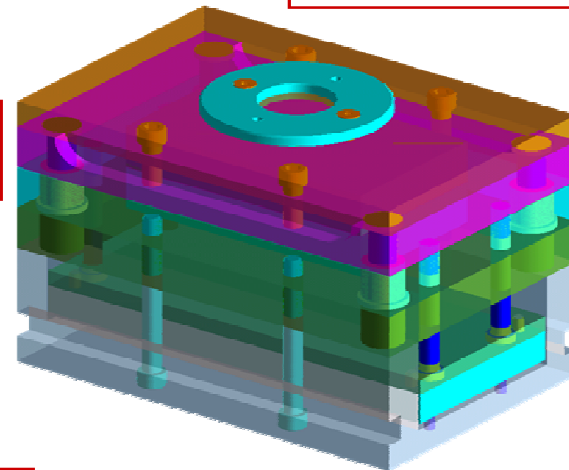
Automatic MoldBase Generation



Automatic BOM Generation

Automatic Standard Components Generation

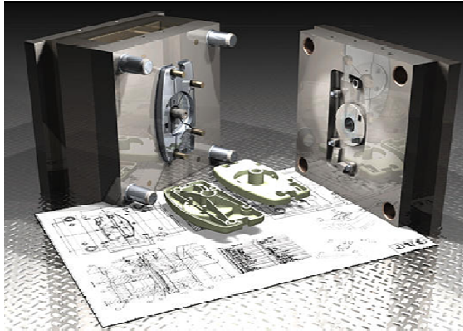
Automatic Electrode Parts Generation



Automatic Drawing Generation



# NCCAS NX Draft Automation

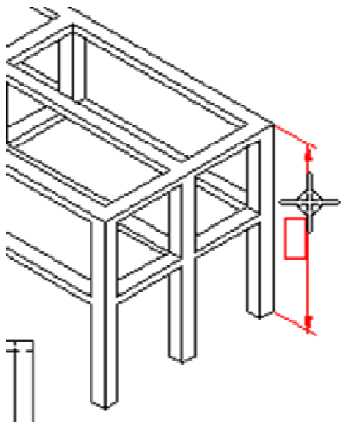
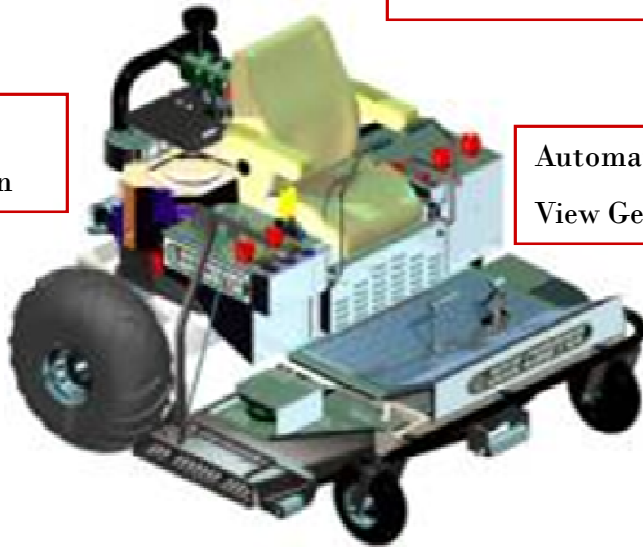


Automatic generation of Drawings, views, dimensions, annotation, title block, etc. It will help to save a lot of time on drafting.

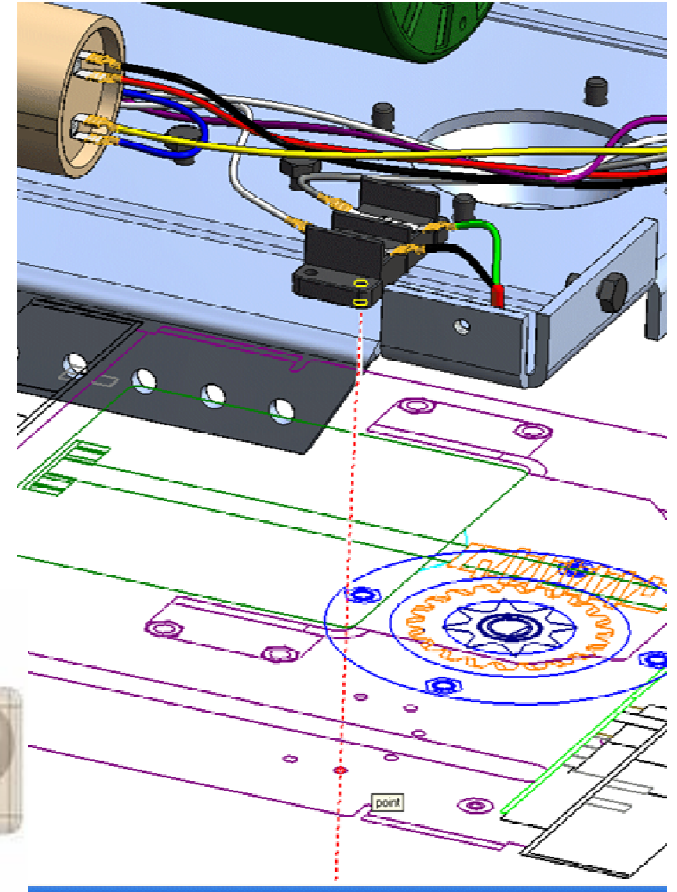
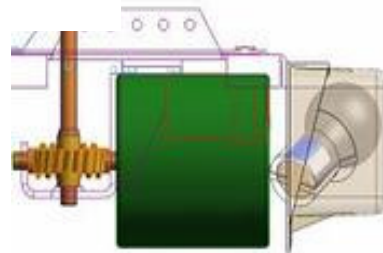
Automatic  
Dimension Generation

Automatic  
Annotation Generation

Automatic  
View Generation



Automatic  
Balloon Tag Generation





# NCCAS NX CAM Automation

---

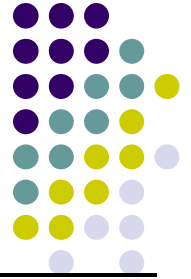
## What is NX CAM Automation?

NX CAM Automation helps to capture your best practice in NC programming and turn it into a automatic process by developing Customized application in Unigraphics NX with UG/Open API, C/C++, C#, etc.

It will automatically identify machining features and automatically generate tool paths, with less or no user intercalations.

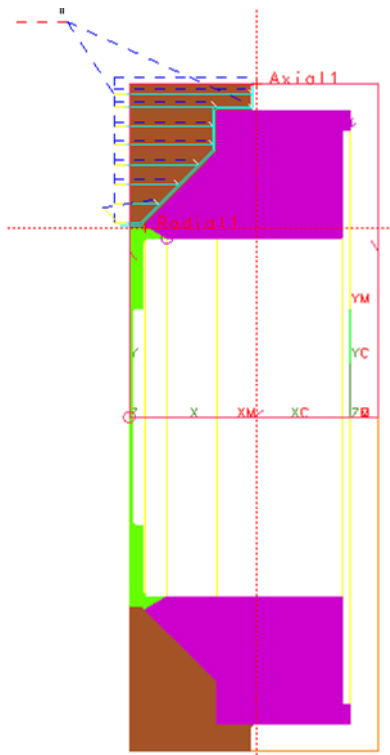
## What are Benefits from NX CAM Automation?

- Capture the Best practice in NC Programming;
- Reduce the NC Programming time by up to 90%.
- Ensure the Consistency in NC programming;
- Ensure the consistency in Machining Quality;
- Avoid errors from manual NC Programming;



# NCCAS NX CAM Automation

## <Example I> NX CAM Turning Automation



One company needs to turn the **2000** parts profile as shown on the left, each part with different Diameters, height and angles, but with similar shape. There are about 20 machining processes, including OD, Facing, ID bore, drill, thread-mill, on both sides. It will take about **4~8** hours for an experienced CAM programmer to create all operations for each part.

But it will take about just one minute for the CAM Automation to generate all the Tool paths.

**The time saved:** (4~8) Hours x 2000 = **(8000 ~ 16000) Hours**

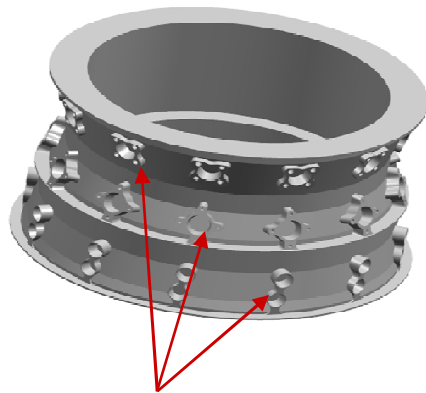
**Additionally, it will —**

- Standardize the best programming practice;
- Ensure the consistency in NC programming and Machining Quality;
- Avoid errors in manual NC programming;



# NCCAS NX CAM Automation

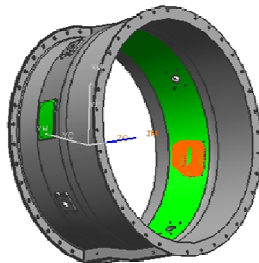
## <Example II> NX CAM 5-Axis Pad Milling Automation



One Aircraft engine machining company has many models of engine cases, each with different pad features, as shown in the picture on the left. All pads are 5-axis machining process, it will take an experienced CAM Programmer days to programming all pad features.

With feature-based Mill Automation, it will automatically identify those pad features and generate necessary tool paths automatically.

Together with many other **Feature-based** mill Automation tools, the company has reduced the Complicated Engine NC 5-axis Programming from **2 months** to **10 days**.

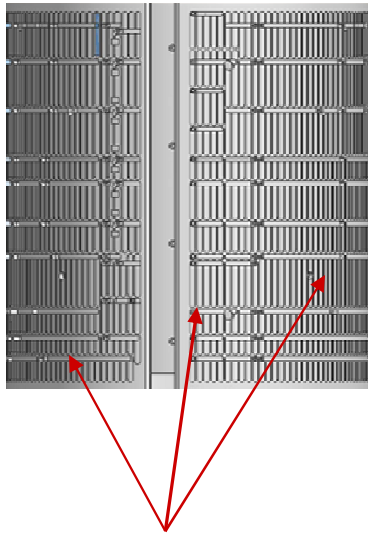






# NCCAS NX CAM Automation

## <Example III> NX CAM 5-Axis Slot Milling Automation

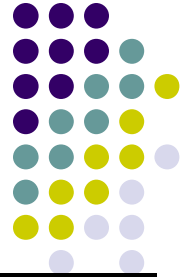


One company provides machining service for about 100 different models of parts as shown on the left. Each parts has hundreds of slots and holes as shown, and it will take an experienced CAM programmer 5~8 days to do the NC programming, verification, modification, simulation, and there are still a lot of errors during the test-cut.

With the feature-base Slot milling Automation, the tool paths can be generated in minutes, with no machining errors. Operations include: Spot Drill, Drill, Rough slot mill, Finish Slot mill, Reaming, Boring, Tapping, etc. and no errors

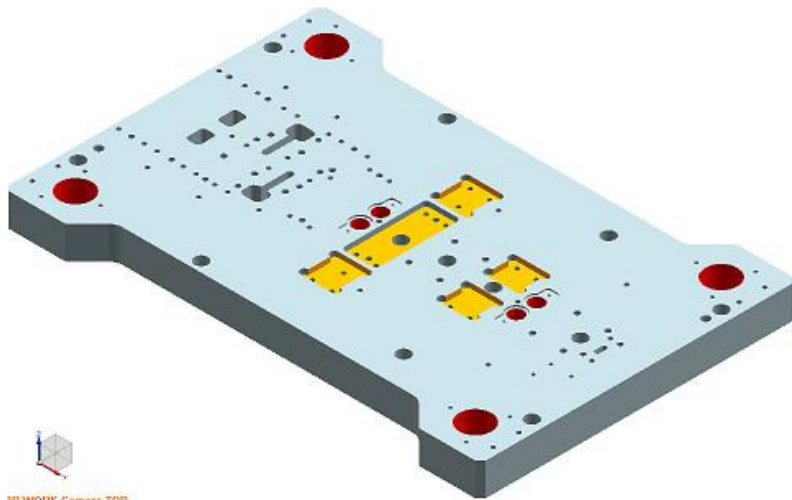
Time saved:  $100 * (5\sim 8)\text{days} = (500 \sim 800)\text{days}$ .

And most importantly, it avoids the potential errors by manual NC programming.



# NCCAS NX CAM Automation

## <Example III> NX CAM Feature-Base Hole-Making Automation

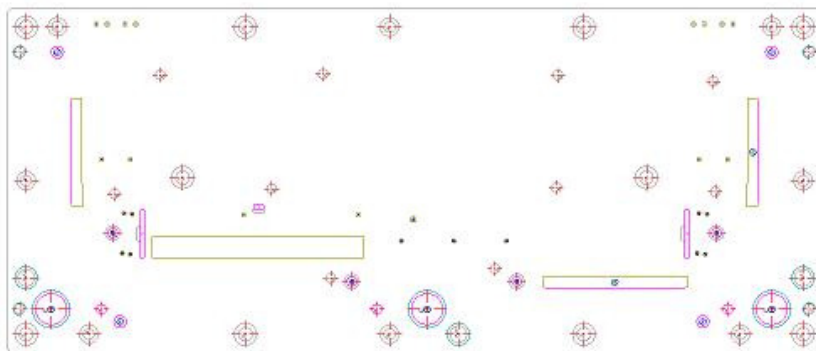


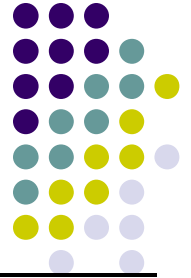
One company is providing plate machining service, they have annually 200 different models of plates each years. And there are dozens to hundreds of different holes, as shown in the picture below. And the order come in 2D Drawings or 3D models. It will take an experiences NC programmer 1 ~ 5 days to do the NC programming, depending on the amount of holes and types.

With the feature-base Hole-Making Automation, the tool paths can be generated in minutes, with no machining errors.

Time saved:  $200 * (1\sim 5)\text{days} = (200 \sim 1000)\text{days}$ .

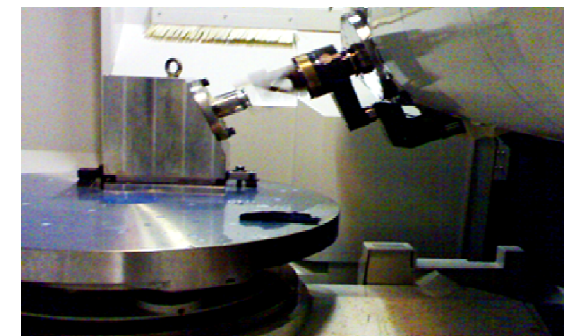
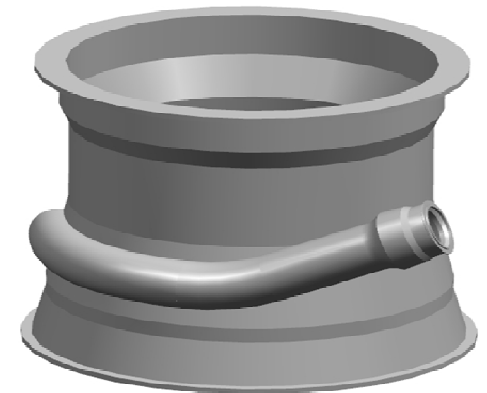
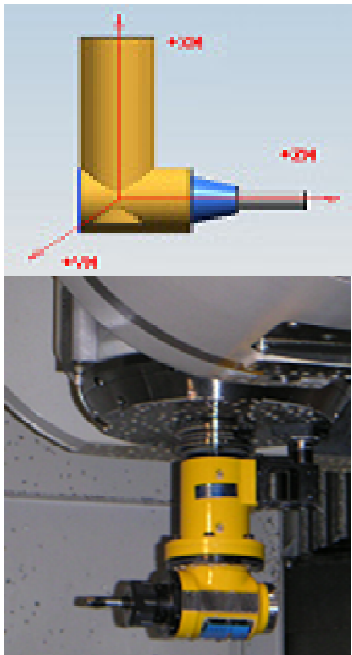
And most importantly, it avoids the potential errors by manual NC programming.





# NCCAS NX Postprocessor

We have developed all kinds of UG postprocessors for different machines and NC controllers, turning and milling, 3 ~ 9 axis. Major machine brands include Makino, Mazak, Mori-seiki, DMG, FANUC, Siemens, Mitsubishi, Zayer, etc. Special applications include Angular head tools, U-center tools, etc.



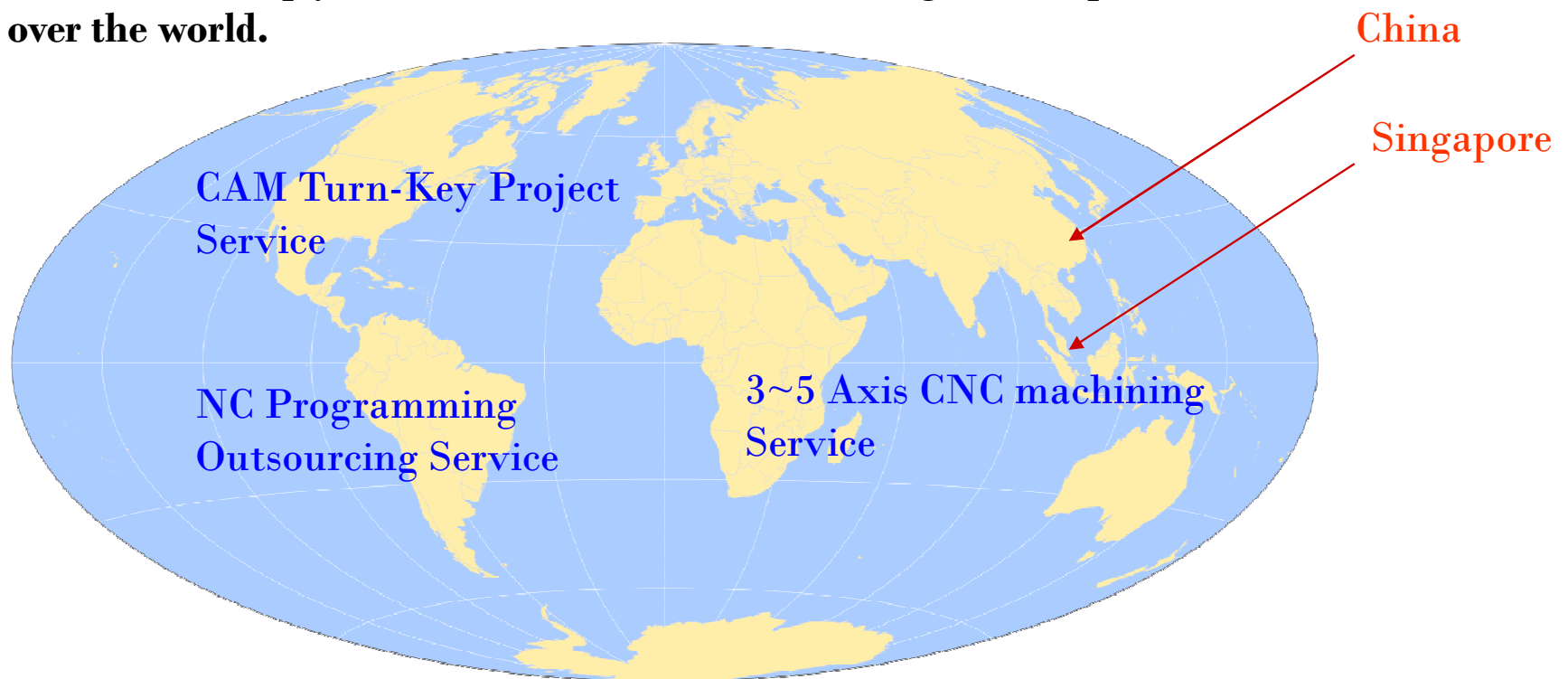


# **NCCAS Global CNC Machining Service**

**Looking for a High-quality and Low-cost CNC Machining Service?**

**Our machining research center and Manufacturing Plants in Singapore and China can provide you the best CNC Machining services.**

**We can also help you to find the best CNC machining Service provider all over the world.**





We will make our best effort to support your business growth.

***Thanks!***