

AZ-post

Hybrid Postprocessor Solution

The AZpost Goal

Dynamic Tool Manager (DTM) (available mid 2006)

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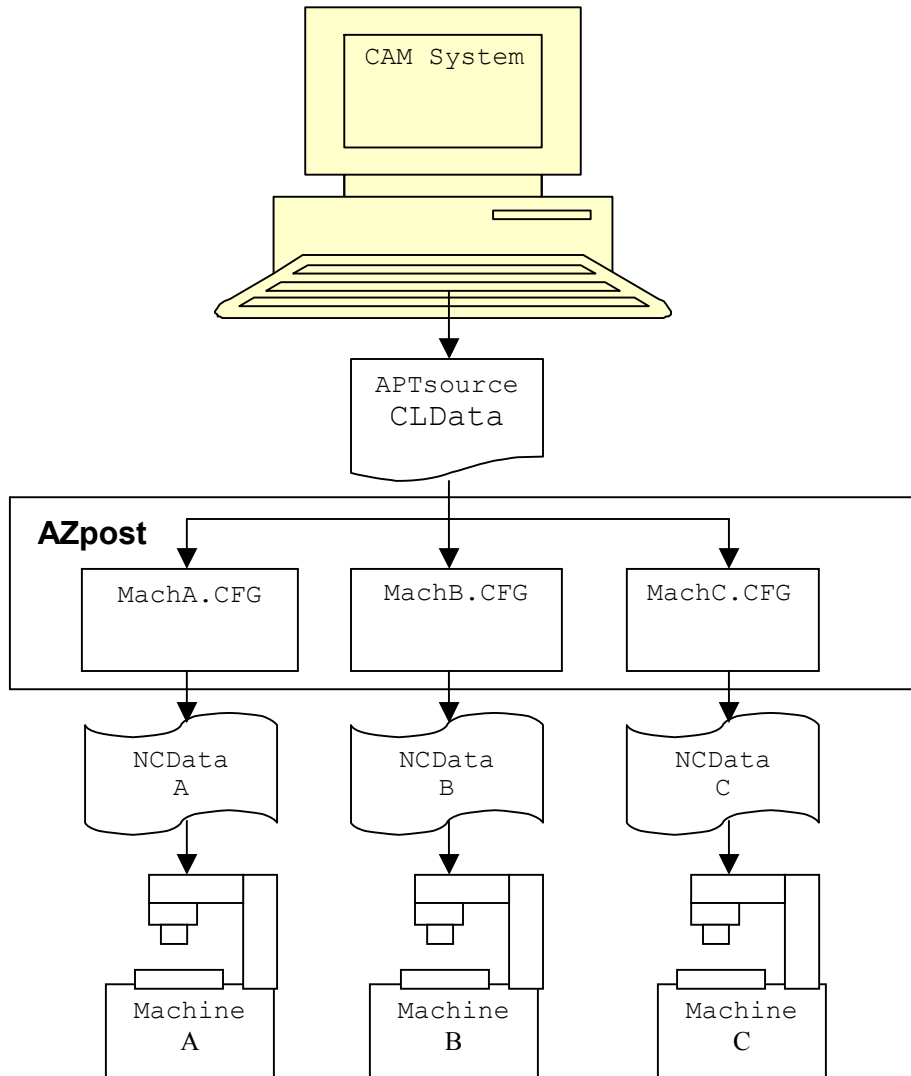
Hybrid Postprocessor Solution

ONE AZpost - **ALL** your CNC Machine Tools

NCData Services
Manufacturing Solutions
www.NCdataSolutions.com

(928) 532-8045
NCData@Frontiernet.net

The AZpost Goal



Remove unique machine tool syntax from the part program (APT source) and put this information in a configuration file whose name can be referenced in the part program.

The specific machine tool can then be re-targeted by simply referencing a different configuration file.

Dynamic Tool Manager (DTM) (available mid 2006)

The Dynamic Tool Manager interfaces dynamically with the Tool Data Base, the CAM system APTsource file (**ACL**) and creates a **dynamic tool data file**. This file is then used by the AZpost postprocessor to produce the NC data for the CNC machine tool. This file is also used in the shop for tool setup prior to machining and to easily accommodate changes during machining.

Benefits:

- Tool length is kept to a minimum optimizing machine productivity.
- Allows dynamic multi-axis tool length adjustments on all CNC machine tools.
- Expedites tool setup prior to machining.
- Eliminates inconsistent tool data between engineering and shop floor.
- Enables dynamic changes to be made at machining time.
- Supports AZpost strategy (one ACL to many CNC machine tools).
- Supports ANSI X3.37 (ACL) standard for data format and logic.
- Promotes Just-In-Time machining practices.
- Promotes the ability to target any capable CNC machine tool JIT.
(ability to easily move the machining (ACL) from one machine to another).

How it works:

The CAM system produces a source cldata file (SCL) containing the standard LOAD/ TOOL syntax and CUTTER syntax. The CUTTER provides the cutter tip geometry variables (Diameter, Radius, etc.) The LOAD / TOOL syntax provides the CAM system minimum tool length, optional tool location in the machine tool, and tool data base reference ID.

The Tool Data Base provides the minimum and maximum possible setting length of the tool in the holder, description of the tooling components, feed rates and spindle speeds, other customer defined data needed to build the tool, including component inventory numbers.

The Dynamic Tool Manager takes what is requested by the CAM system in the ACL file and what is available in the tool data base. This information is optimally combined and presented to the shop floor prior to machining. This information is used to make machining decisions, to select tools from the tool crib, and to setup the tools that need to be built based on decisions made. This finalized information is used to create a setup document for tool and machine setup. The ACL files is updated by resolving TOOL/ LOAD syntax with data produced by the Dynamic Tool Manager.

The **AZpost** produces the NC data used by the CNC machine tool using the SCL file updated by the DTM including tool position in machine tool, Tool set length, cutting feed rates and spindle speeds.

Any changes to the tooling information that occurs during machining is made using the **DTM** and dynamically updates the tool setup (flags changes) and updates the **SCL** file and causes re-processing by the AZpost postprocessor and updating of the **NC data** file to correspond to the tooling setup changes.

