STEP-NC Implementation Program

Status Report for February 2003

Summary

This brief report is sent to members of the Implementation Program every month. You are welcome to e-mail me at any time to get more information.

After the highly successful JPL demo, we have been focusing on building a robust software base for the next round of demonstrations in June. In the June demonstration we are planning to show milling of surfaces for the first time using the PE software developed by Boeing and to show interoperability by showing the same part being made on different machines.

ST-Plan/FB Mach News

For parts with good geometry we are now able to quickly create AP-238 plans for a large range of features if the engineer making the plan understands the set-up of the target machine. This is good but not ideal because an AP-238 file should be machine and set-up independent so we need to work on adding intelligence to ST-Machine so that it can process a greater range of set-up's.

ST-Machine News

We are working very hard on the new STEP Index Library (STIX). This library will allow ST-Machine to get direct access to the STEP data via an API with a rich set of functions for dealing with units, axes, tolerances and other attributes. This will make it possible for ST-Machine to perform geometric calculations where necessary something that is not possible with the current XML interface.

We plan to release the STIX library under a dual license agreement. An open source license agreement for those interested in research and testing, and a conventional license agreement for those that want to build and market commercial products containing the library.

Standards News

For the past 9 months we have been working with Siemens to exchange a 14649 file. We are ready to declare this project a failure. At our side of the Atlantic we do not know enough about the Siemens tool to determine the correct set-up, orientation or speed and feed data to define a correct 14649 exchange file. On their side of the Atlantic they do not know enough about the intent of our process plan to set this information either.

Our conclusion is that STEP-NC must be based on an extension of AP-224 (i.e. AP-238) because AP-224 allows the required design intent to be conveyed to the receiver thereby allowing the receiver to compute the correct set-up, orientation and speed and feed data for a chosen machine using intelligent software (e.g. ST-machine).

Martin Hardwick
President STEP Tools, Inc.
Team Leader ISO TC184/SC4 Wg3/T24 STEP-Manufacturing

STEP Tools, Inc.
216 River Street
Troy, New York 12180
Ph: 518/687-2848, Fax: 518-687-4420
Info@steptools.com, www.steptools.com