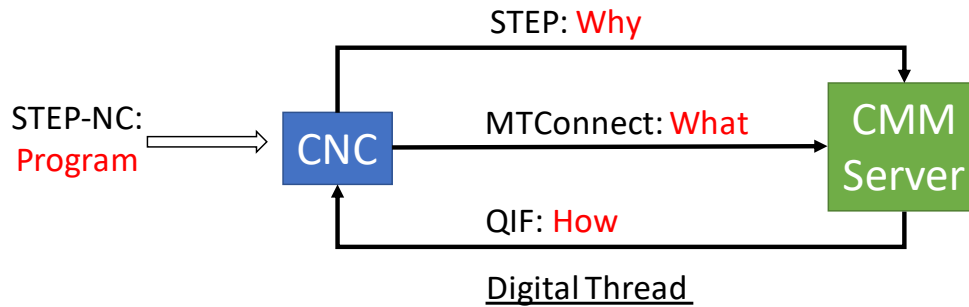# IMTS and JIMTOF 2018 Grand Challenge
# "Build it Here, Build it Now, Build it Right"

In 2018, we challenge the CNC machine tool vendors to show they can build parts <u>here</u> because they support interoperability, they can build parts <u>now</u> because they run programs safely, and they can build parts <u>right</u> because they meet their tolerances.



We will supply STEP-NC programs. We will ask vendors at IMTS and JIMTOF to make parts here and now, and give them three ways to show they are right.

1. Deliver the parts to a central location for measurement on a CMM.
2. Measure the parts using a touch probe and send the coordinates using MTConnect.
3. Make digital twins for measurement in real time using a high speed MTConnect.

| | | MTConnect | | |
|---|---|---|---|---|
| | STEP | [1-10Hz] | [100-1000Hz] | QIF |
| Challenge 1 | X | - | - | X |
| Challenge 2 | X | X | - | X |
| Challenge 3 | X | - | X | X |

The results of the measurements will be confidential and will be returned as QIF files. To participate you will need to read CNC programs defined by STEP. DLL and LINUX applications are available for writing and converting STEP-NC programs into executable codes. For the second and the third challenges you will need an MTConnect that can operate at the speeds shown in the table.

<u>Schedule (July 2017 to November 2018)</u>

- Month 1 - endorsement of standards groups
- Month 2 – endorsement of challenge sponsors
- Month 3, 4, 5 – presentations to interested parties
- Months 6 to 12 – rehearsals at test sites
- Month 14 & 16 – IMTS and JIMTOF