

WG15 meeting at Longacres Renton USA, February 3 to 7, 2020

In person

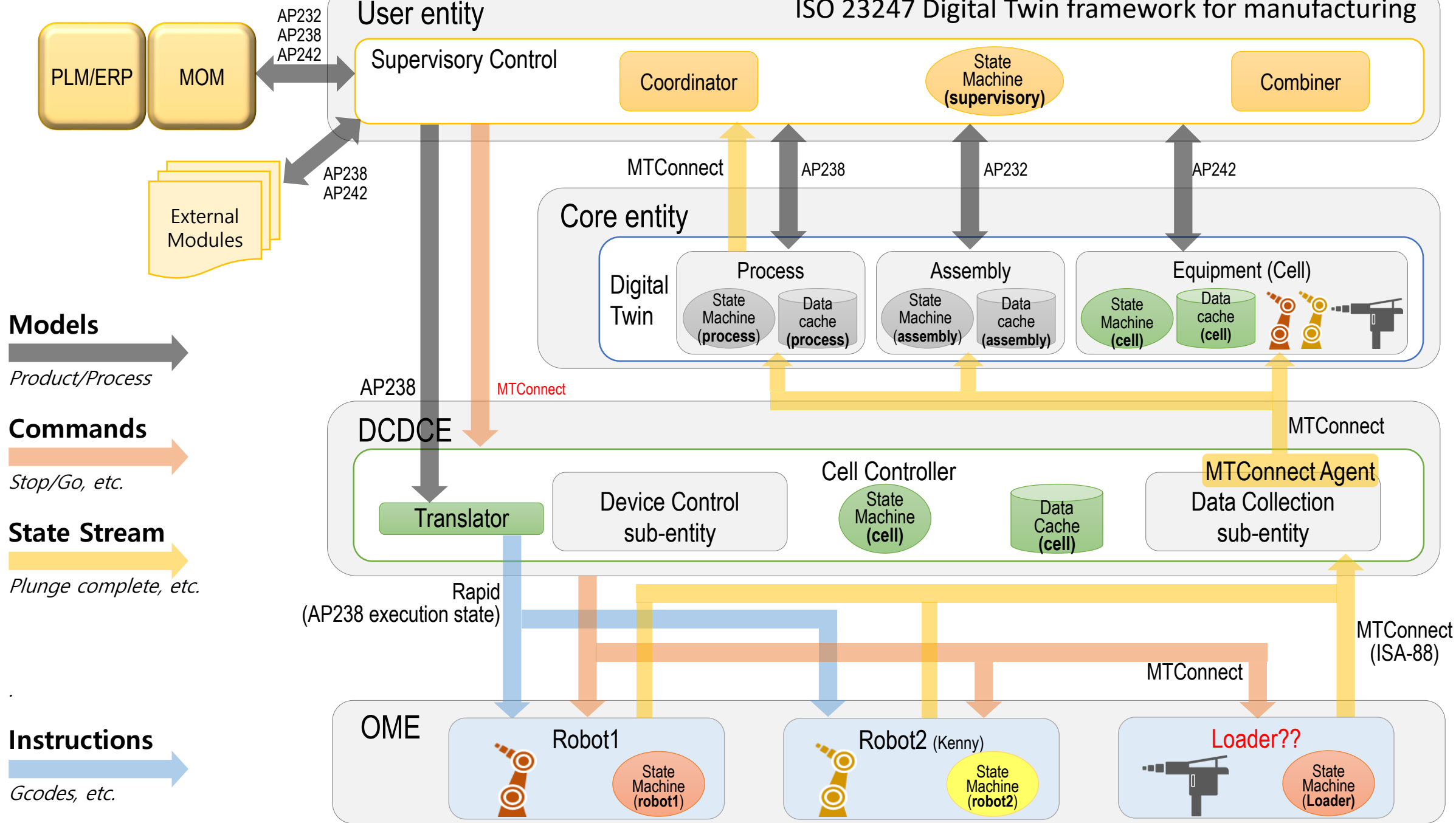
Martin Hardwick, STEP Tools, USA
Haibo Duan, PERAGlobal, China
Jin Lee, ETRI, Korea
Sung Hei Kim, ETRI, Korea
Hyunjeong Lee, ETRI, Korea
Sangkeun Yoo ETRI, Korea
David Odendahl, Boeing, USA
Sid Venkatesh, Boeing USA
Fred Richter, Boeing USA
Wen Jiang, Boeing
David Briggs, Boeing USA
Kenny Swope, Boeing, USA
Liming Li, JSL Innovations, USA
Gordon Shao, NIST, USA
Jan De Nijs, Lockheed, USA
Bryan Fischer, TDP360, USA

By teleconference

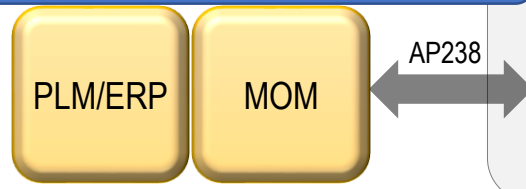
Bengt Olsson, Sandvik, Sweden
Renato Ottone, Italy
Clare Paul, AFRL, USA
Afina Lupulescu, ASM, USA
Jay Ganguli, UTC, USA
Larry Maggiano, Mitutoyo, USA
Eric Truffet, IoT Management, France
Michael, Hoffmeister, Festo, Germany
Gunilla Sivard, KTH, Sweden
Magnus Lundgren, KTH, Sweden
Thomas Lundholm, KTH, Sweden
Darya Botkina, KTH, Sweden

1. We reviewed and resolved the comments from the successful CD for ISO 23247 Digital Twin framework for manufacturing.
2. We developed three digital twin use cases
 - a. Dynamic Scheduling for Multi-robot drill and fill (slide 1).
 - b. On-machine measurement (slide 2).
 - c. Tool life optimization (slide 2).
3. We agreed that the DIS for ISO 23247 is technically complete and ready for submission when the remaining general edits have been completed.

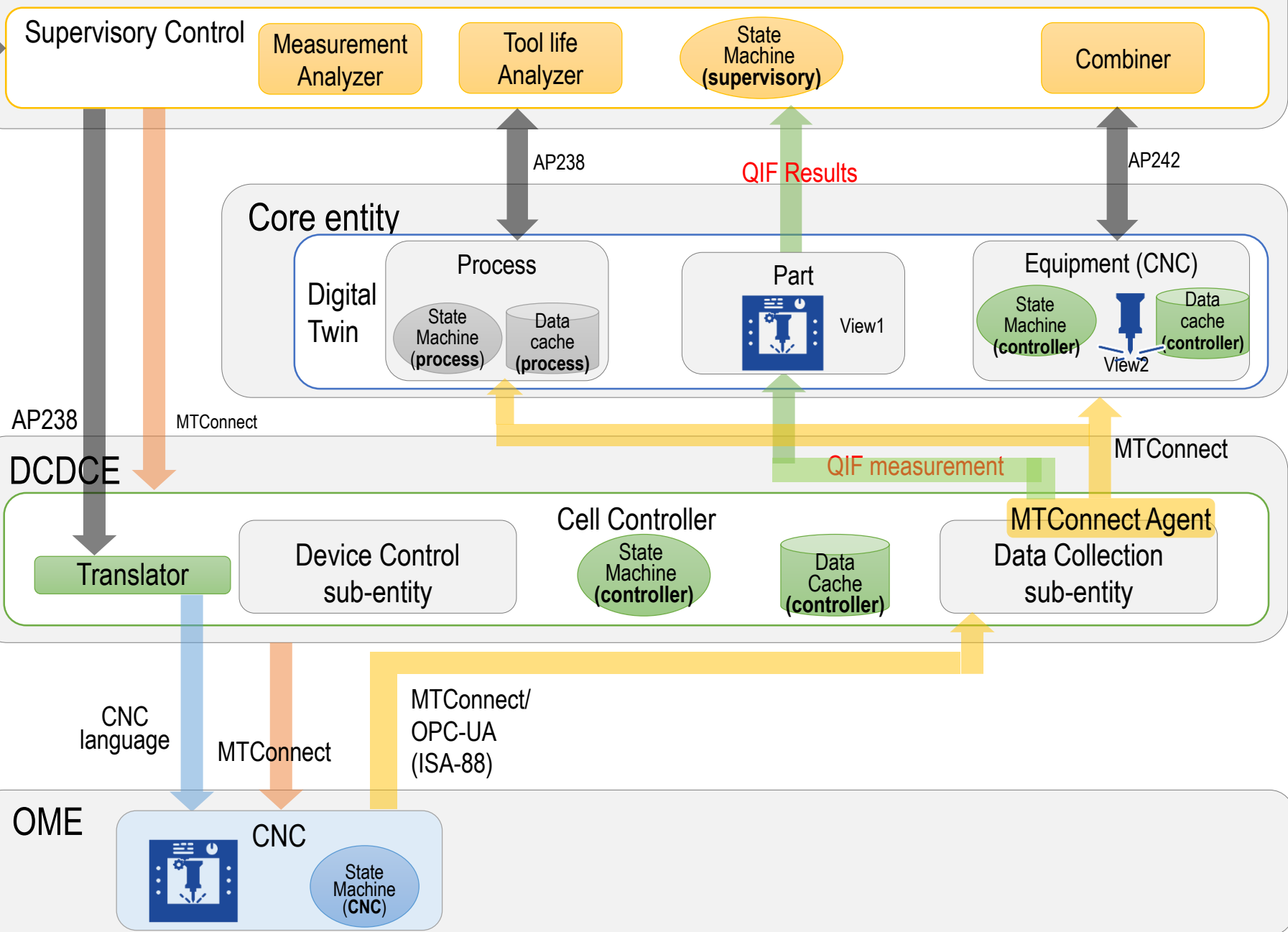
An archive of the presentations made at the meeting is at: <http://ap238.org/iso23247/>



Measurement and tool life use cases



ISO 23247 Digital Twin framework for manufacturing



Models
Product/Process

Commands
Stop/Go, etc.

State Stream
Plunge complete, etc.

Measurements
Hole dimensions, etc.

Instructions
Gcodes, etc.