

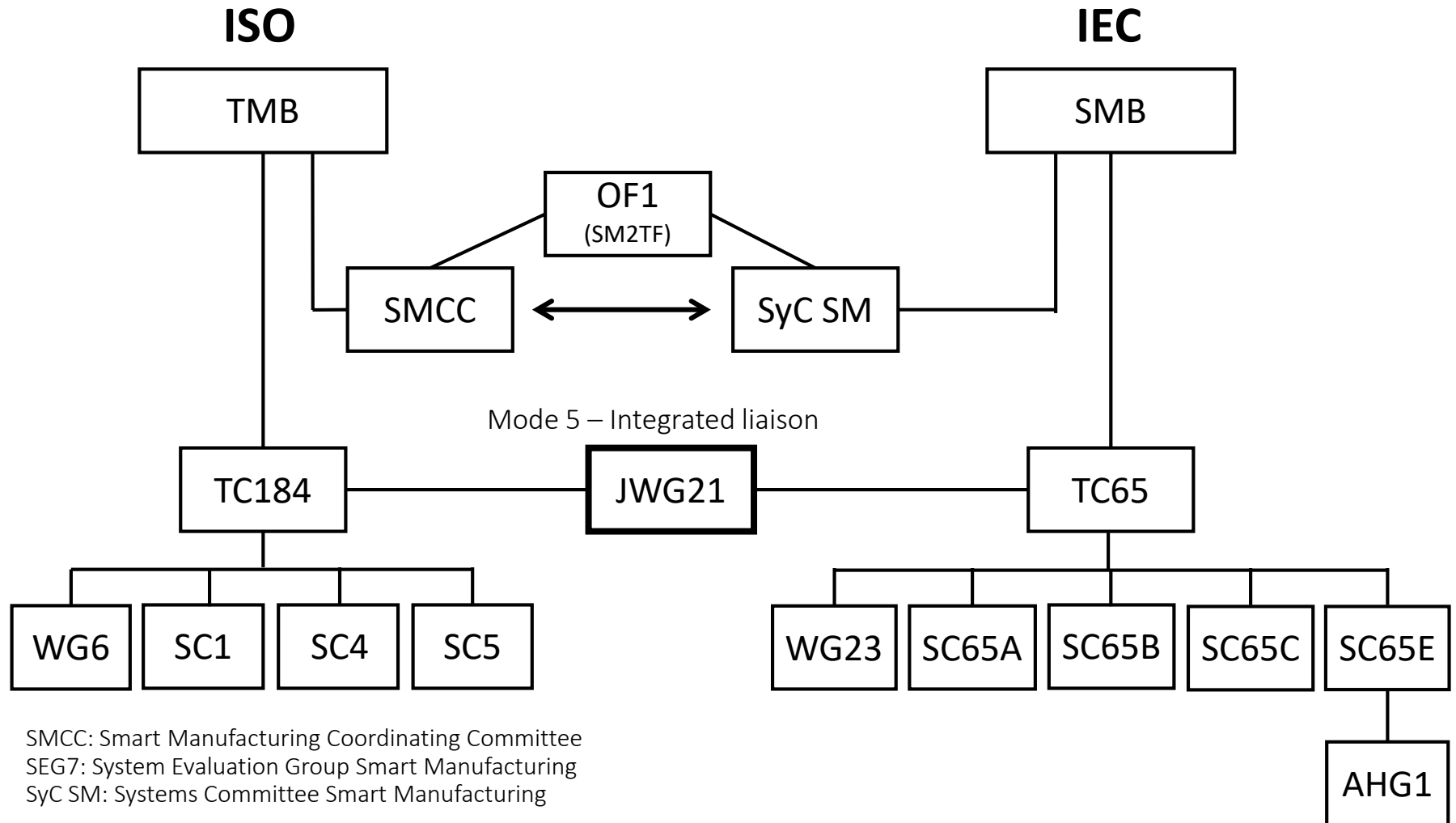
ISO TC184-IEC TC65 JWG21
Paris, France, 2019-11-19/21

ISO TC184 – IEC TC65
Joint Working Group 21
Smart Manufacturing Reference Model(s)



Fumihiko Kimura(ISO) and Dennis Brandl(IEC)
Co-Convenors

(2019-11-19)

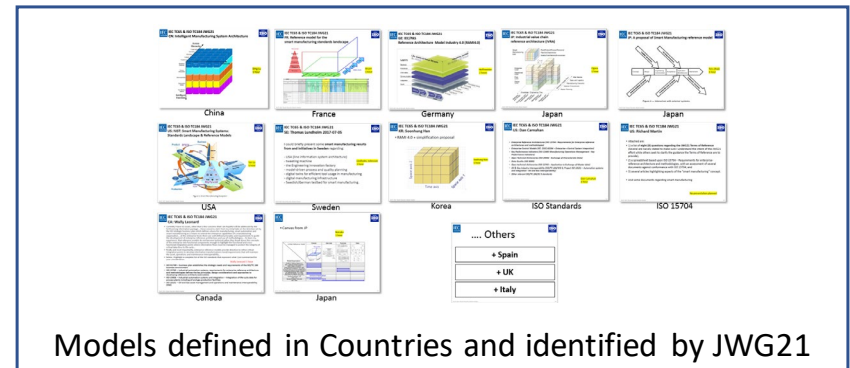
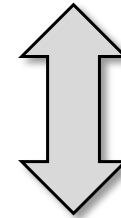


JWG21 Terms of Reference

JWG shall prepare a standardized unified Reference Model to support ISO TC184 and IEC TC65 activities in Smart Manufacturing.

The Reference Model shall comprise a single model, possibly with a set of consistent and coherent sub-models, and align with the requirements of stakeholder groups, including manufacturing system users, suppliers, integrators, standardisers, and consumers of manufactured products.

The Reference Model
IEC / ISO



JWG21 Deliverables:

- TR:SMRM (Meta-modelling Analysis Approach to Smart Manufacturing Reference Models) (tentative title)

The objective of the TR is to review the current status about smart manufacturing reference models and propose a meta-model to describe smart manufacturing reference models.

- TS/IS:SMRM (Smart Manufacturing Reference Model) (tentative title)

Requirement and specification of a smart manufacturing reference model.

JWG21 Members

Member: 85+ (ISO: 33+ ?, IEC: 52- ?)

FR(14), DE(11), US(11), JP(9), SE(8), CN(7), IT(5), KR(5), AT(3), UK(3), CA(2), ES(2), NO(2), DK(1), NL(1): still increasing

JWG21 Meetings

#1: 2017-07-19/20 Frankfurt (number of participants: 40)

#2: 2017-09-27/29 Paris (37)

#3: 2018-01-24/26 Tokyo (36)

#4: 2018-05-15/18 Beijing (34)

#5: 2018-09-19/21 Frankfurt (44)

#6: 2018-11-12/14 Chicago (30)

#7: 2019-02-27/03-01 Paris (37)

#8: 2019-07-10/12 Seoul (35)

#9: 2019-11-19/21 Paris

#10: 2020-04-15/17 Gaithersburg

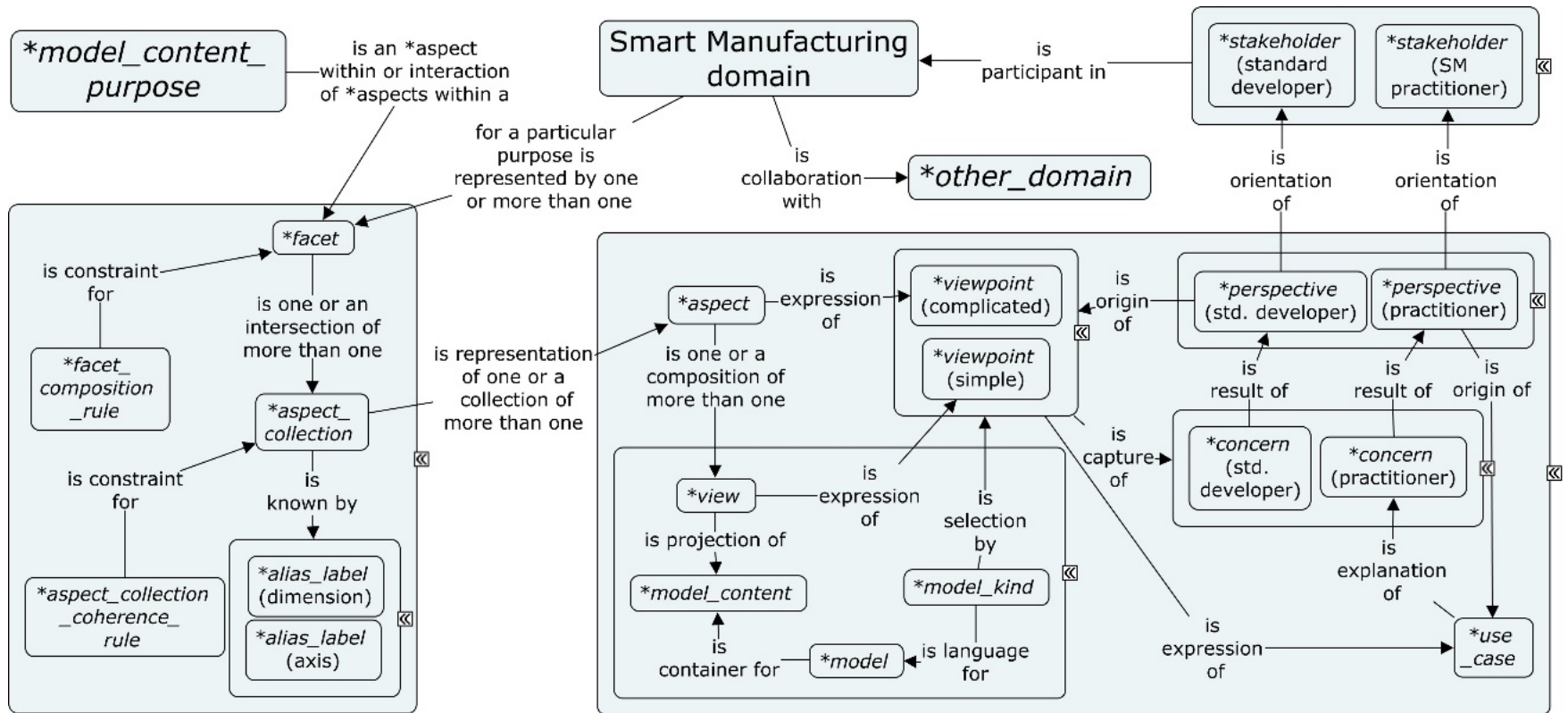
Technical Report:

A Meta-modelling Analysis Approach to Smart Manufacturing Reference Models (SMRMs) (JWG21_N160_v01_2019-08-16)

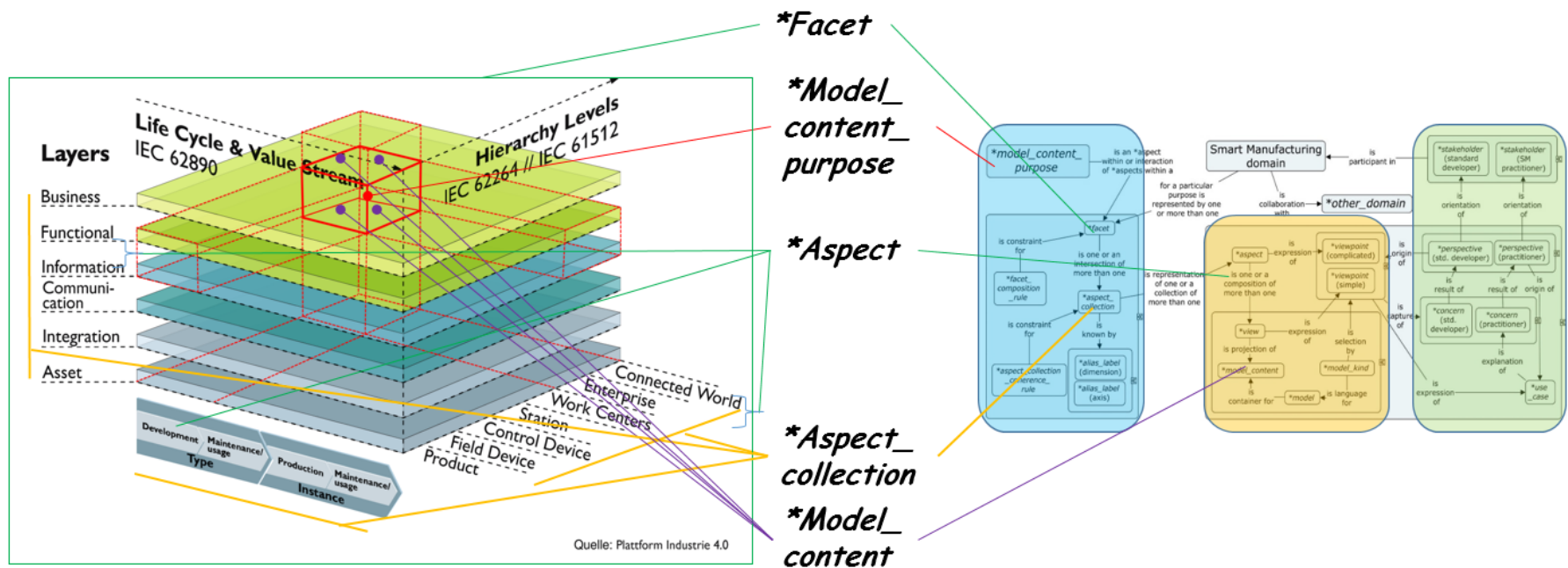
Introduction

1. Scope
2. Normative references
3. Terms and definitions, abbreviations and acronyms
4. Smart manufacturing
5. Smart Manufacturing Reference Model (SMRM)
6. SMRM meta-modelling approach
7. Mapping of the contributions for SMRMs to the SMRM meta-model
8. Analysis of particular collections of aspects
9. Toward a family of SMRM representations

A meta-model for Smart Manufacturing Reference Model



Example Mapping for RAMI 4.0



Work Schedule for TR:SMRM

2018-11-12/14 (Chicago Meeting):

- Comment resolution of the 2nd draft of TR

2019-02-05:

- The 3rd draft distribution

2019-02-02-27/03-01 (Paris Meeting)

- Comment resolution of the 3rd draft of TR

2019-05-19:

- The 4th draft distribution

2019-07-10/12 (Seoul Meeting):

- Comment resolution of the 4th draft of TR

2019-08-30 DC circulation for comments (ISO TC184 and IEC TC65)

2019-11-08 Close of DC circulation

2019-11-19/21 (Paris Meeting):

- Comment resolution on DC

2020 Q1:

- DTR distribution (8 weeks)

Work Schedule for IS/TS:SMRM

2019-10 -- Web meetings --

- IS/TS justification
- IS/TS scope/requirement/outline
- IS/TS NWIP (Form_04) draft

2019-11-19/21 (Paris Meeting)

- Discussion on IS/TS 1st draft (outline)
- NP Preparation (Form_04 + WD)

2020-04-15/17

- Discussion on IS/TS 2nd draft
- NP Preparation (Form_04 + WD)

Work Plan for TR:SMRM

[DAY1]

STEP1: Classification of comments

- General comments

- Change of the document structure (18 comments)

- Technical comments

- Editorial comments

STEP2: Resolution of Technical comments

[DAY2]

STEP3: Resolution of General comments

STEP4: Final confirmation of Table of Contents

STEP5: Resolution of Editorial comments