# NDIA CMMI Working Group

## NDIA System Engineering Division

## June 17, 2015

# CMMI WG: Standards Mappings

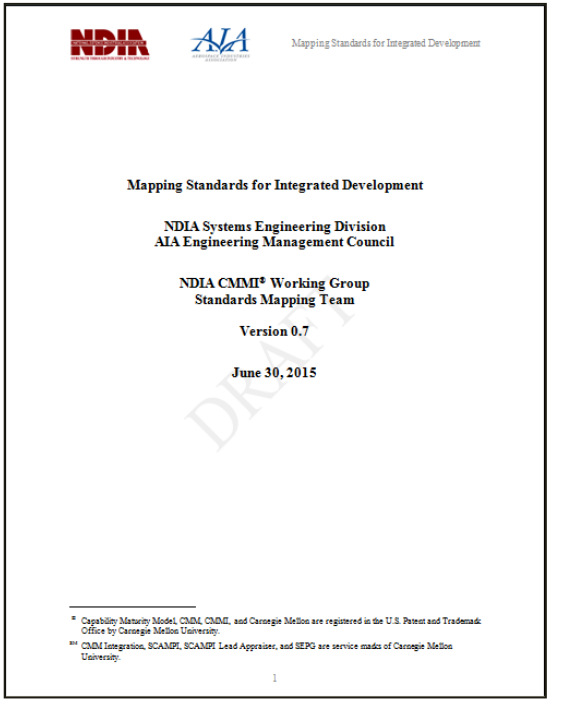
**NDIA consensus mappings between leading standards will help facilitate company migration to IEEE 15288.x.**

- Translate currently implemented company standards and process mappings to 15288
- NDIA mappings developed by consensus of subject matter experts

**Complements deployment strategy from DoD/NDIA IEEE 15288 working group.**

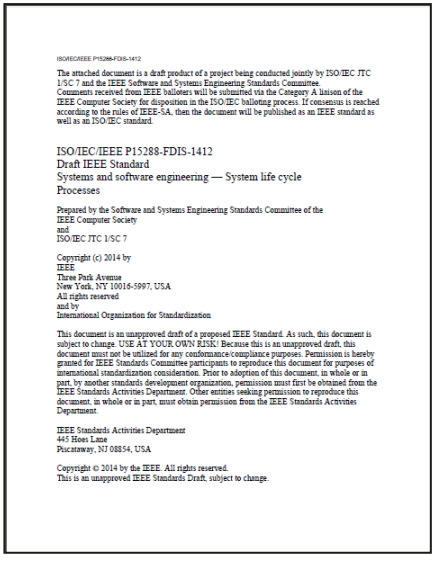
**Participating organizations**

| | |
|---|---|
| Lockheed Martin | Harris |
| Leidos | L-3 Communications |
| Integrated System Diagnostics | Boeing |
| Process Improvement & Consulting | Raytheon |
| Northrop Grumman | Method Park |
| Orbital Sciences | BAE Systems |
| IEEE Computer Society | CERTON |




Mapping document v0.7 nearing ready for NDIA/AIA review and approval to publish

# IEEE 15288 Standards Set
## Published May 2015

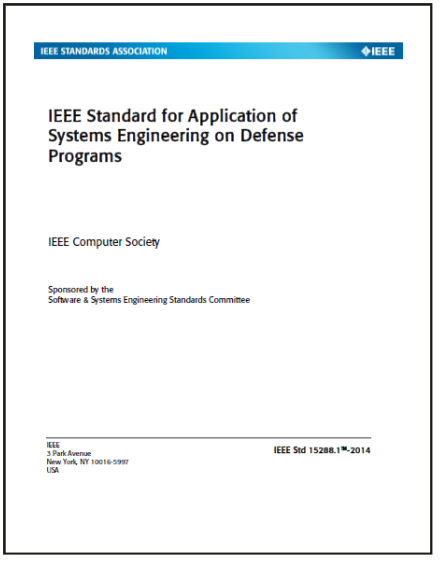

ISO/IEC/IEEE P15288-FDIS-1412

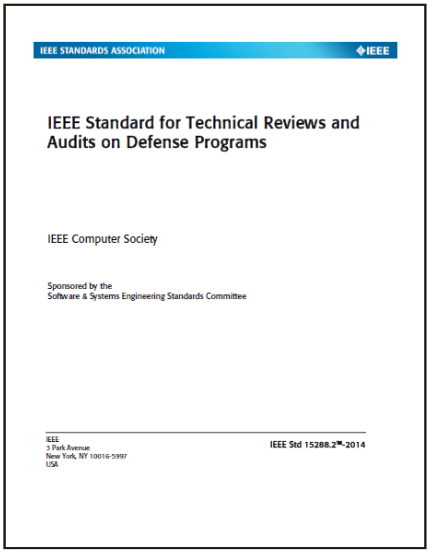
The attached document is a draft product of a project being conducted jointly by ISO/IEC JTC 1/SC 7 and the IEEE Software and Systems Engineering Standards Committee. Comments received from IEEE balloters will be submitted via the Category A liaison of the IEEE Computer Society for disposition in the ISO/IEC balloting process. If consensus is reached according to the rules of IEEE-SA, then the document will be published as an IEEE standard as well as an ISO/IEC standard.

ISO/IEC/IEEE P15288-FDIS-1412
Draft IEEE Standard
Systems and software engineering — System life cycle Processes

Prepared by the Software and Systems Engineering Standards Committee of the IEEE Computer Society
and
ISO/IEC JTC 1/SC 7






4. *ISO/IEC/IEEE 15288-2015, Systems and software engineering – System life cycle processes,* http://www.techstreet.com/ieee/products/vendor_id/5673

5. *IEEE 15288.1-2014, Standard for Application of Systems Engineering on Defense Programs, May 2015.* http://www.techstreet.com/ieee/products/1895162

6. *IEEE 15288.2-2014, Standard for Technical Reviews and Audits on Defense Programs, May 2015.* http://www.techstreet.com/ieee/products/1895163

# Conops – IEEE 15288.1 Deployment Strategy and Integrated Standards Mappings in Acquisition

## DoD

**15288.1 Deployment Strategy (OSD)**

- •RFP language
- •Tailoring guidance
- •Compliance and monitoring approach

•Joint DoD/NDIA WG

*Acquisition Program Office*

**RFP** (levy tailored 15288.1)

**Contract Monitoring** (compliance)

•Tailoring
•15288.x conformance

•Work products
•Activities, tasks

## Industry

*Companies can leverage NDIA consensus standards mappings and extend for their respective org processes and products.*

**Company Processes**

**Proposal** (Org mappings to15288.x)

**SEMP** (Contractual)

•SEMP and org 15288.x mappings provided with proposal responses

*Company mappings*

| Requirements | Standards | | | | Products | | | | Company Mappings | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ☑ | | | | ☑ | | | | ☑ | | | |
| | ☑ | ☑ | | ☑ | | ☑ | | | | ☑ | | |
| | | ☑ | | | ☑ | | ☑ | | | ☑ | ☑ | |
| | ☑ | | ☑ | | ☑ | | | ☑ | ☑ | | | ☑ |

*(15288.1 outputs only)*

*Consensus mappings*

**NDIA CMMI WG**

Consensus Industry Mappings among leading standards

Priority: CMMI vs. 15288

- **CMMI**
- **AS9100 / ISO 9001**
- **IEEE 15288 and .1 DoD**

*IEEE 15288/15288.1 Deployment Work Aids*

*Publish consensus standards mappings in a format that can be extended by companies for their company-specific details.*

# Example Mapping (Draft)

| Section | ISO 15288 Keywords | 15288.1 Outputs (6.x.x.4) | NDIA Comments | Team Review | CMMI Practices | Conf | Aggregate Conf |
|---|---|---|---|---|---|---|---|
| **6.3** | **~~Project~~ Technical Management Processes** | | | | | | |
| **6.3.1** | **Project Planning Process** | | | | | | |
| **6.3.1.3** | **Activities and tasks** | | | | | | |
| **6.3.1.3a** | **Define the project** | | | | | | |
| 6.3.1.3a 1 | Identify objectives | Plan - SEMP | IPM select/tailor processes<br>SubP 3 constraints<br>Drop PP SP3.2 reconcile<br>QPM Est objectives<br>GP2.2 objectives, quality<br>IPM plan=needs, objs, req<br><br>QPM 1.1 100? | Y | PP SP 2.1<br>IPM SP 1.1<br>IPM SP 1.4<br>QPM SP 1.1<br>* GP 2.2 | 30<br>60<br>100<br>60<br>60 | 100 |
| 6.3.1.3a 2 | Define scope | Plan - SEMP | | Y | PP SP 1.1 | 100 | 100 |
| 6.3.1.3a 3 | Define life cycle model | Plan - SEMP | Project life cycle > PP<br>Org life cycles > IPM | Y | PP SP 1.3<br>IPM SP 1.1 | 60<br>100 | 100 |
| 6.3.1.3a 4 | Establish WBS | WBS (Work Breakdown Structure) | | Y | PP SP 1.1<br>PP SP 2.4 | 60<br>100 | 100 |
| 6.3.1.3a 5 | Define project processes | Plan - IMP | Drop PP2.7 <> processes<br>IPM defined proc, tailoring<br>GP 3.1 defined proc cont<br>GP 3.1 looked at in aggregate | Y | IPM SP 1.1<br>* GP 2.2<br>* GP 3.1 | 100<br>100<br>100 | 100 |
| **6.3.1.3b** | **Plan ~~the~~ project ~~resources~~ and technical management** | | | | | | |
| 6.3.1.3b 1 | Define schedule | IMS (Integrated Master Schedule) | IPM SP1.4 SubP 4 sched<br>IPM SP2.2 dependencies<br>PP SP2.1 Schedule<br>PP SP1.2 Est wp, tasks<br>PP SP1.3 Life cycle, seq<br>PP SP1.4 Est effort, cost | Y | PP SP 1.2<br>PP SP 1.3<br>PP SP 1.4<br>PP SP 2.1<br>IPM SP 1.4<br>IPM SP 2.2 | 30<br>60<br>30<br>100<br>60<br>60 | 100 |
| 6.3.1.3b 2 | Define achievement criteria | Plan - SEMP | SP1.4 risk, sched, entry<br>PP SP1.3 Lifecycle phases<br>PP SP1.1 sched delivery dates<br>IPM SP2.2 depend, commit<br>Drop IPM SP1.1 life cycle<br>Drop PP SP2.1 budget,sched | | IPM SP 1.4<br>PP SP 1.3<br>PP SP 1.1<br>IPM SP 2.2 | 100<br>60<br>60<br>60 | 100 |
| 6.3.1.3b 3 | Define budget | EVM (Earned Value Management)<br>Planning | PP SP2.1 Est budget<br>PP SP1.4 effort, cost, infra<br>IPM SP1.4 integ plans, risks<br>Drop IPM SP1.2 org assets | | PP SP 2.1<br>PP SP 1.4<br>IPM SP 1.4 | 100<br>100<br>60 | 100 |

# Current IEEE 15288 / CMMI-DEV Mapping Status

Mapping document (NDIA/AIA) completed – ready for review and approvals to publish.

- References separate CMMI/15288 mapping spreadsheet

| | | | |
|---|---|---|---|
| Completed | 19 | **Task Review Complete** | **385** |
| Disposition | 3 | **Progress** | **84.99%** |
| Consensus | 0 | | |
| Drafted | 3 | | |
| Gap Comments | 5 | | |
| **Total (30):** | **30** | | |

Nearing completion of initial mappings, peer reviews, and disposition of consensus comments. (Est. end of June ‘15)


Consistency checking across all processes to reconcile author differences in mappings. (est. end of July ‘15)

Publication: est. August ‘15

POCs:

- Bryan Bost (Harris) – *standards mapping lead*
- Garry Roedler (Lockheed Martin)
- Geoff Draper (Harris)
- Joe Elm (SEI) – *DoD/NDIA 15288 transition WG lead*