Schedule Margin
Resolution Status

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New IPMR Language

IPMR DID

(3.7.2.4. Schedule Margin)

"…Schedule margin, if any, shall only be placed as the last task/activity/gap before a contract event or end item deliverable…"

IPMR DID Implementation Guide

(4.14.2 Intent Regarding Schedule Margin)

"…Schedule margin may be in the critical path with discrete predecessors and successors…"

SM can be dispersed and drive discrete successors

SM Implementation Issues

- Despite the new DID language specifically allowing for dispersed SM task with discrete successors, some government agencies were not allowing this practice

    - Even when aligned with the SM requirements identified in DI-MGMT-81861 (IPMR DID), contractors were often encouraged to deviate from, and in some cases re-write, their standard practices

Resolution Appeal to PARCA

- **The NDIA IPMD submitted an "Implementation and Issue Resolution" request to PARCA for areas including:**

PARCA response confirmed the IPMD interpretation of the DID/IG

- Dispersal of SM tasks within an IMS

- Ability of SM tasks to drive other discrete successors and potentially fall on critical/driving paths

PARCA response was silent on the issue

- Ability to have a zero-day SM baseline duration

- **Joint Government/Industry coordination held in February hosted by PARCA**

- **DCMA/NAVAIR did not have issue with zero-duration SM baseline**

- **DCMA/NAVAIR expressed other concerns with dispersed SM:**

  - SM tasks create "BCWS Gaps" with could negatively effect management through EV metrics and render trend data ineffective

    - Done properly, SM tasks increase the accuracy of downstream planning. A better IMS baseline will yield better EV metrics

    - Since SM tasks are just prior to significant events (i.e. CDR), the "gaps" will typically not be imbedded in the middle of CAs/WPs. However, SM periods will need to be understood by the PM team when doing higher-level trend analysis

  - Potential to abuse SM periods when treated as a "get well" remedy for poor performance

    - SM should represent an estimate of expected schedule risk, not just metric "padding".

Primary Gov't Concern

- **But the primary compliance concern was that the new IPMR language around SM is in conflict with other direction**
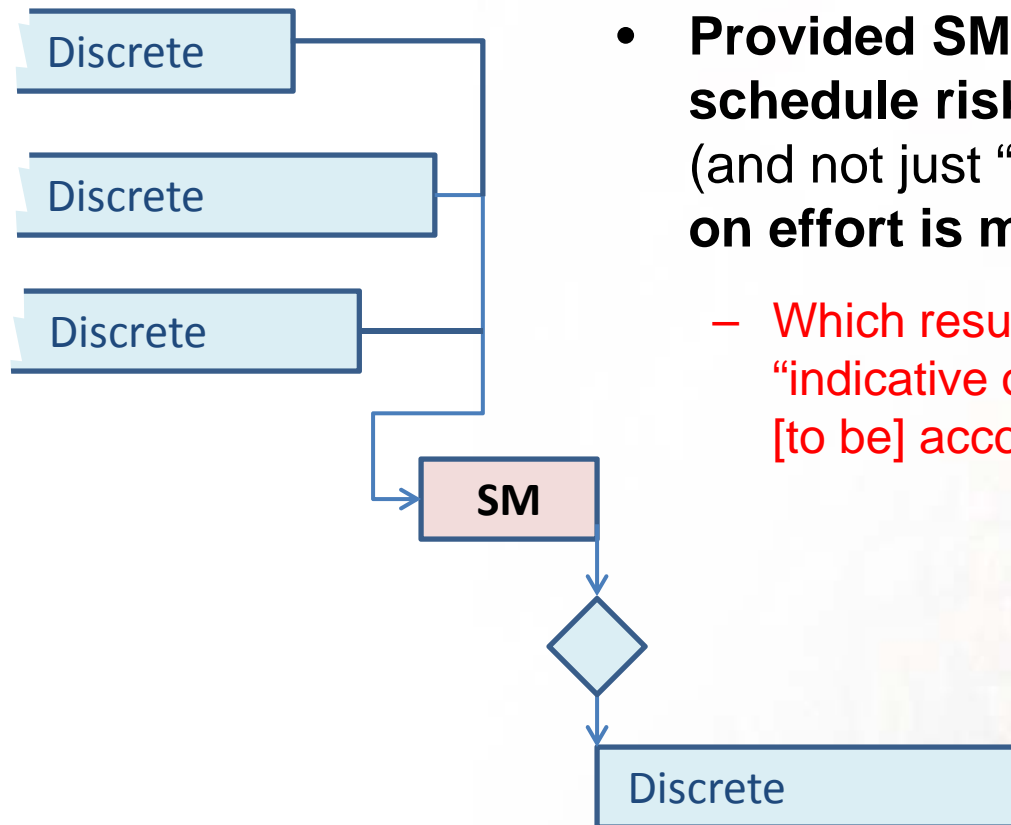
  DoD EVMS Interpretation Guide

  Guideline 6: Attributes

  - The network schedule/IMS depicts the sequence of work (horizontal integration) and clearly identifies the significant interdependencies that are <u>indicative of the actual way the work is planned and accomplished</u>.

Concern Resolution

Discrete

Discrete

Discrete

SM

Discrete

- **Provided SM represents the estimated schedule risk to the subsequent event** (and not just "leftover" time)**, the follow-on effort is more accurately located**

  - Which results in a plan that is more "indicative of the actual way the work is [to be] accomplished"

Guidelines for Compliance

- **For SM to be used in a compliant manner dispersed within an IMS with discrete successors, the following conditions should be met:**

  – The forecasted duration of SM tasks is owned/controlled by the PM and represents the time currently estimated for schedule risks/uncertainties

  – Changes to BL duration should be controlled in accordance with the contractor's change control process

  – SM implementation and maintenance should be consistent with the SD

  – SM tasks should be traceable to the contractor's risk management system

  – If the tasks that make up the project Critical/Driving Path are different when calculated without SM (done by temporarily changing the duration of all SM tasks to 0 days), effective internal controls should be in place to allow for an understanding of those differences. They should be understood (and be able to be explained) by the PM/CAMs (and not just the scheduler).

Big Win for Everyone

- **Government / Industry cooperation has resulted in significant advancements in the area of schedule margin**

    - Better defined SM to be a representation of schedule risk/uncertainty

    - Provides a process for the compliant incorporation of SM tasks within an IMS

        - Adds clarity to the appropriate integration points

        - Allows for SM to have discrete predecessors and successors

        - Potentially falling on critical/driving paths

But we are not quite finished…

Zero-Duration SM Baseline

- **DCMA / NAVAIR is now expressing concerns with zero-duration SM baselines**

  – Believe that SM should not be created on "day one" through a challenged forecast, but instead SM could be "harvested" as the project actually begins to execute tasks ahead of the baseline plan

- **PSWG stance:**

  – With or without the use of SM techniques, a PM may issue a "challenge" to finish earlier than the baseline plan

    - This is not non-compliant, provided the "challenged" tasks durations are still reasonably achievable

  – A challenged forecast may result in increased risk to completing individual tasks as forecasted, but with the inclusion of SM, the overall risk to the subsequent event should be decreased

  – Executing at a pace that is quicker than the baseline would typically be an indication of decreased risk (and thus decreasing SM duration)

    - not an opportunity to "harvest" (or increase) SM

2nd Approach to SM

- **In addition to the "Risk Management" approach to incorporating SM into an IMS, DCMA / NAVAIR is also proposing a second "Float Management" option**

    - With this approach, SM can still be dispersed throughout the IMS just prior to significant events, however key difference include:

        - There is no requirement to associate the SM task with risk or trace it to the risk register

        - The SM tasks may <u>not</u> drive discrete successors (directly or indirectly)

        - The SM tasks may <u>not</u> fall on the critical path

"Float Management" Plusses

Pro's

- **Consistent with previous direction (DI-MGMT 81650)**

- **Additional flexibility available to industry**

- **No BCWS gap**

- **Simple to implement**

  - No requirement to tie to risk

  - Duration is calculated by a simple formula

    - SM Duration = Contractual Finish – Forecasted Finish

- **No effect on critical/driving paths**

"Float Management" Minuses

Con's

- **No effect on critical/driving paths**
  - If schedule risk exists and can be estimated (shouldn't it effect downstream effort?)

- **Differing implementation and status rules**
  - Added complexity
    - from <1 page to 5 pages to explain in the IPMR DID Implementation Guide
  - Increased potential for confusion (accidental mixing of approaches)

- **Opposite trend analysis**
  - Shortened duration of "Risk Based" SM tasks is typically good news
  - Shortened duration of "Float Based" SM tasks is always bad news

- **Lessens use of Total Float as a management tool**

- **Not consistent with the current definition of schedule margin**
  - Status controlled by a formula (not owned by the PM)

PSWG Opinion

- **The PSWG has had unanimous support for the "Risk Management" approach to schedule margin**

  - Some concern exists over:

    - The expectations of how SM tasks will be traceable to the project's risk management system

    - The level to which the PM team (down to CAMs) will need to understand the differences between 2 sets or critical/driving paths (with and without SM)

- **Conversely, PSWG is not in favor of including the "Float Management" approach as a SM option**

  - Does not add any value to the IMS (does not improve forecast accuracy)

  - Adds complexity and increases the chances for error

  - **Does not believe the "Float Management" approach is non-compliant (companies currently using it can continue), however,**

    - **It just should not be considered to be a "Schedule Margin" approach**

Summary

- **Government / Industry agreement on the "Risk Management" approach is a tremendous step forward !**

  – Makes a clear association between SM tasks and a company's risk management process

  – Forecasting accuracy is increased due to the recognition that schedule risk/uncertainty is likely to effect downstream discrete effort

    • And the more accurate the IMS, the better tool it is to aid the PM team in making sound decisions (resource allocation priorities, risk avoidance, etc)

- **Coordination work is still remaining**

  – Need to come to an consensus on the acceptable uses of zero-duration SM baselines

  – Continue to work the "Float Management" approach concerns

  – Capture all of the conclusions in updated IPMR DID and Implementation Guide language

QUESTIONS?