

Planning & Scheduling Excellence Guide (PASEG)

Overview of Significant Changes

Alex Schostag

Bob Loop

Derek Lehman

Doug Dudgeon

Dustin Shetler

Jeff Lasky

John Scaparro

Lisa Hastings

Tom Terbush

Yancy Qualls

Significant PASEG Changes

The majority of changes were to improve readability (formatting, grammar, improved clarity).

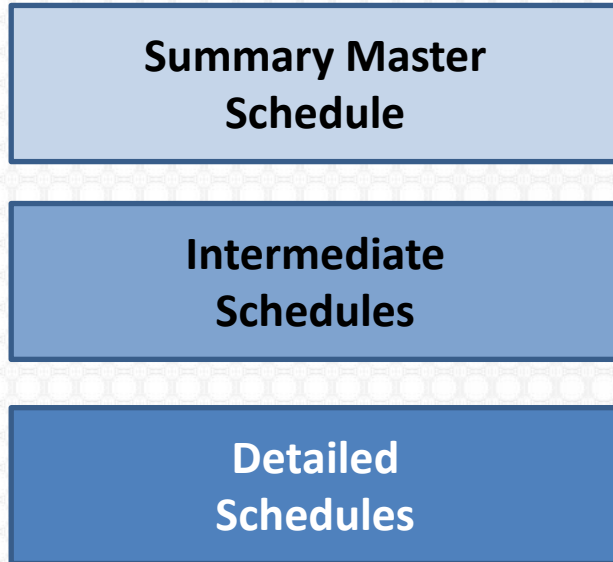
More significant changes were made in the following areas:

- **4.3 Schedule Hierarchy**
- **7.3 Schedule Visibility Tasks** (clarifications on use)
- **10.1 Critical Path/ Driving Path definition update**

Schedule Hierarchy

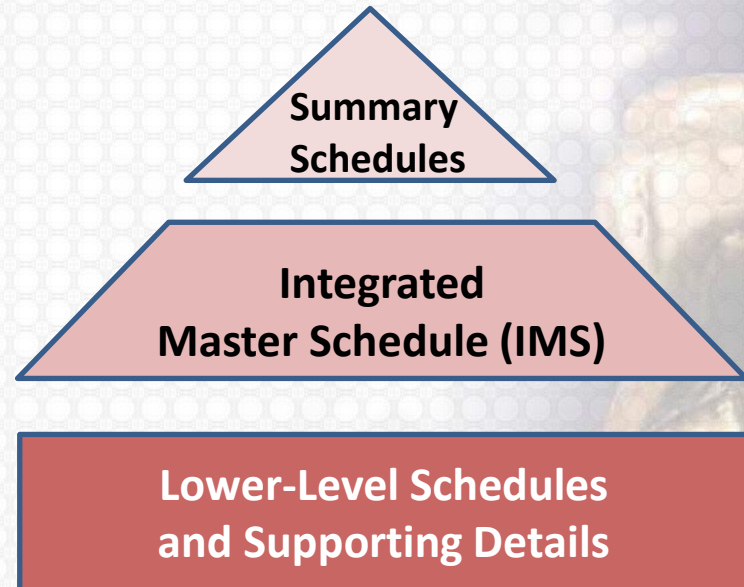
Schedule Hierarchy

Historic Hierarchy Guidance



Past guidance could be interpreted that each level is comprised of separate schedules

PASEG Hierarchy

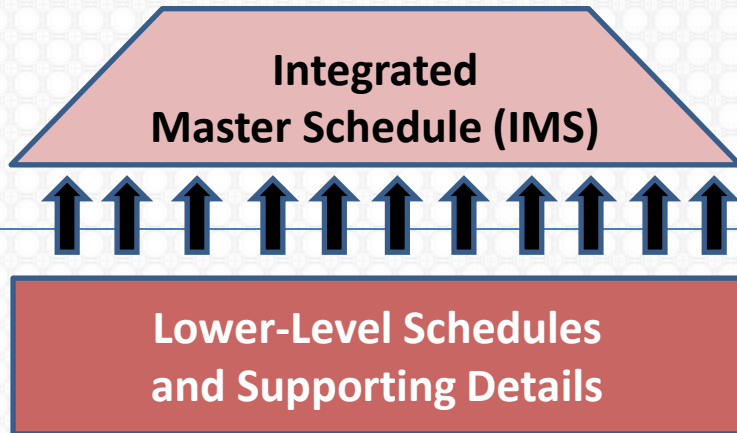


PASEG revisions attempt to promote summary schedules being a roll-up of the IMS

Schedule Hierarchy



Summary Schedules can be separate (but integrated) roll-ups, but more commonly are filtered/summarized views created within the IMS file



Primary management/reporting schedule

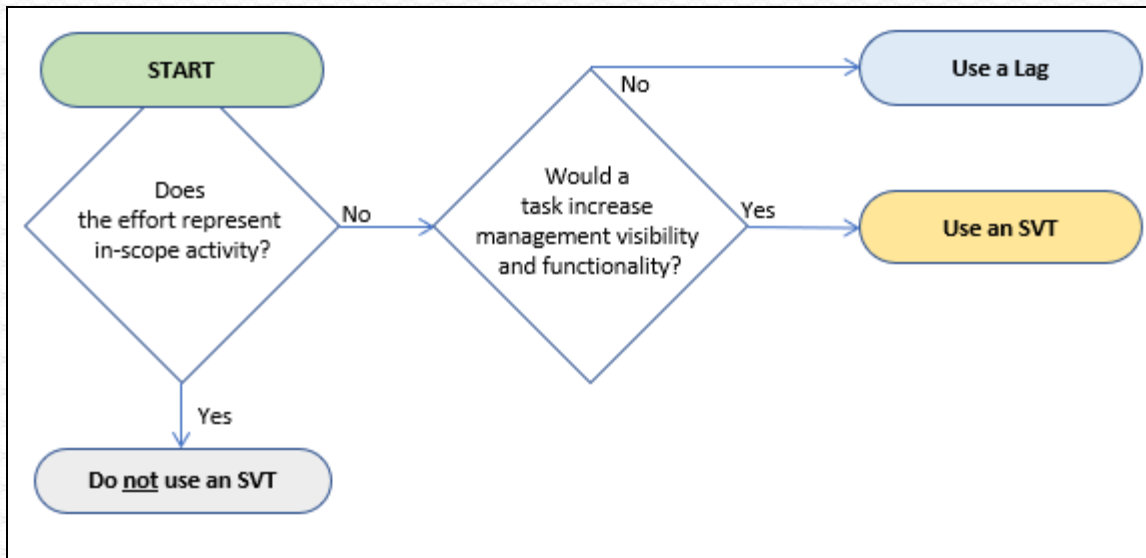
Often separate schedules/files that underpin the IMS

- Plan of the Day Schedules
- Vacation Schedules
- Quantifiable Backup Data
- Etc.

The IMS should accurately reflect all lower level information

Schedule Visibility Tasks

- **7.3 Schedule Visibility Tasks (clarifications on use)**
 - Addition: Table to clarify how SVTs should/ should not be used
 - Addition: Decision Tree for use of SVTs



- **Note: We have a lot more work to do with SVTs**

Critical Path Definition

- Are there compliant ways to use constraints to delay the start of an activity/milestone?
 - Yes (like GFE), if used appropriately and properly justified
- Can (soft) constraints/deadlines be used to model commitment dates?
 - Yes (like contract requirements), if used appropriately and properly justified
- What is total float?
 - *“the amount of time a task/activity or milestone forecast finish date can slip before delaying contract completion or constraint date.”*

Historical Critical Path Definitions

For the last 60+ years, Critical Path Definitions have referenced characteristics such as:

- Longest Duration
- Least Float
- Starts at Time Now

PASEG v4

Critical Path = the longest continuous sequence of tasks from Time Now to the program end date. A delay to any task on the critical path should result in a corresponding delay to the project end date.

GAO Schedule Guide

Critical path The longest continuous sequence of activities in a schedule. Defines the program's earliest completion date or minimum duration

DI-MGMT-81650

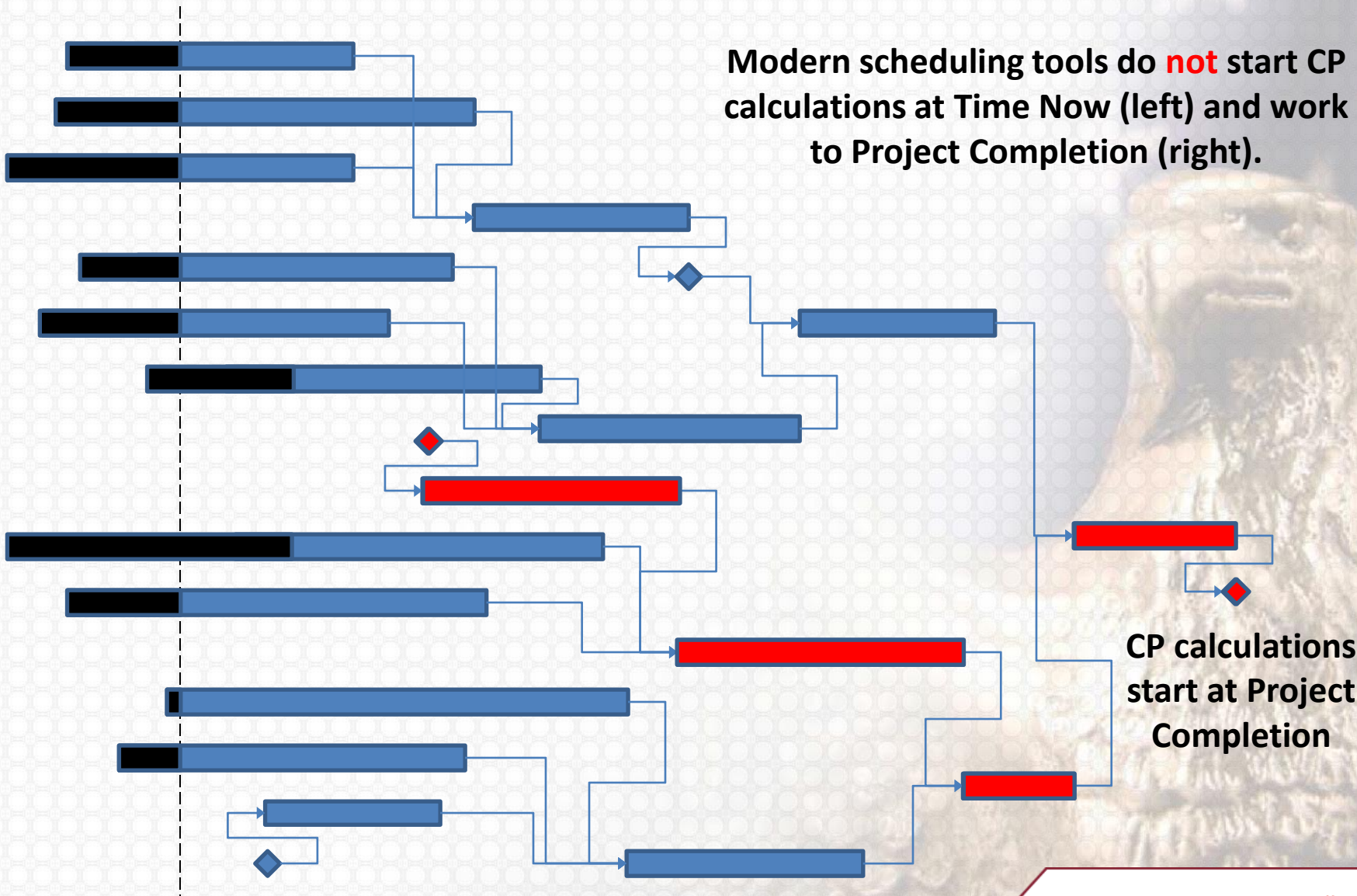
2.4.1.15 Critical Path. A sequence of discrete tasks/activities in the network that has the longest total duration through the contract or project. Discrete tasks/activities along the critical path have the least amount of float/slack. The critical path and near-critical paths (reporting requirements for near-critical paths shall be specified in the CDRL) are calculated by the scheduling software application. The guidelines for critical path and near-critical path reporting are as follows:

DI-MISC-81183A

g. Critical path - A sequence of activities in the network that has the longest total duration through the program or project. Activities along the critical path have zero or negative slack/float. It should be easily distinguished on the report formats; e.g. a thick line, patterned or in red ink. This should be calculated by computer-based software.

In an unconstrained network, all of the above characteristics are true

Critical Path Determination



Modern scheduling tools do **not** start CP calculations at Time Now (left) and work to Project Completion (right).

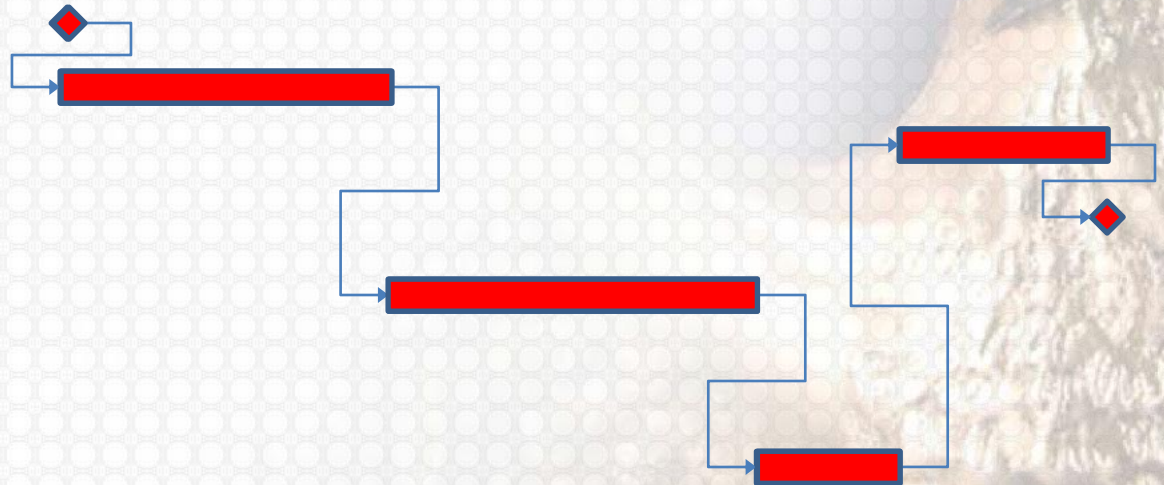
CP calculations start at Project Completion

Critical Path Determination

STOP Critical/Driving Path calculation can stop at:

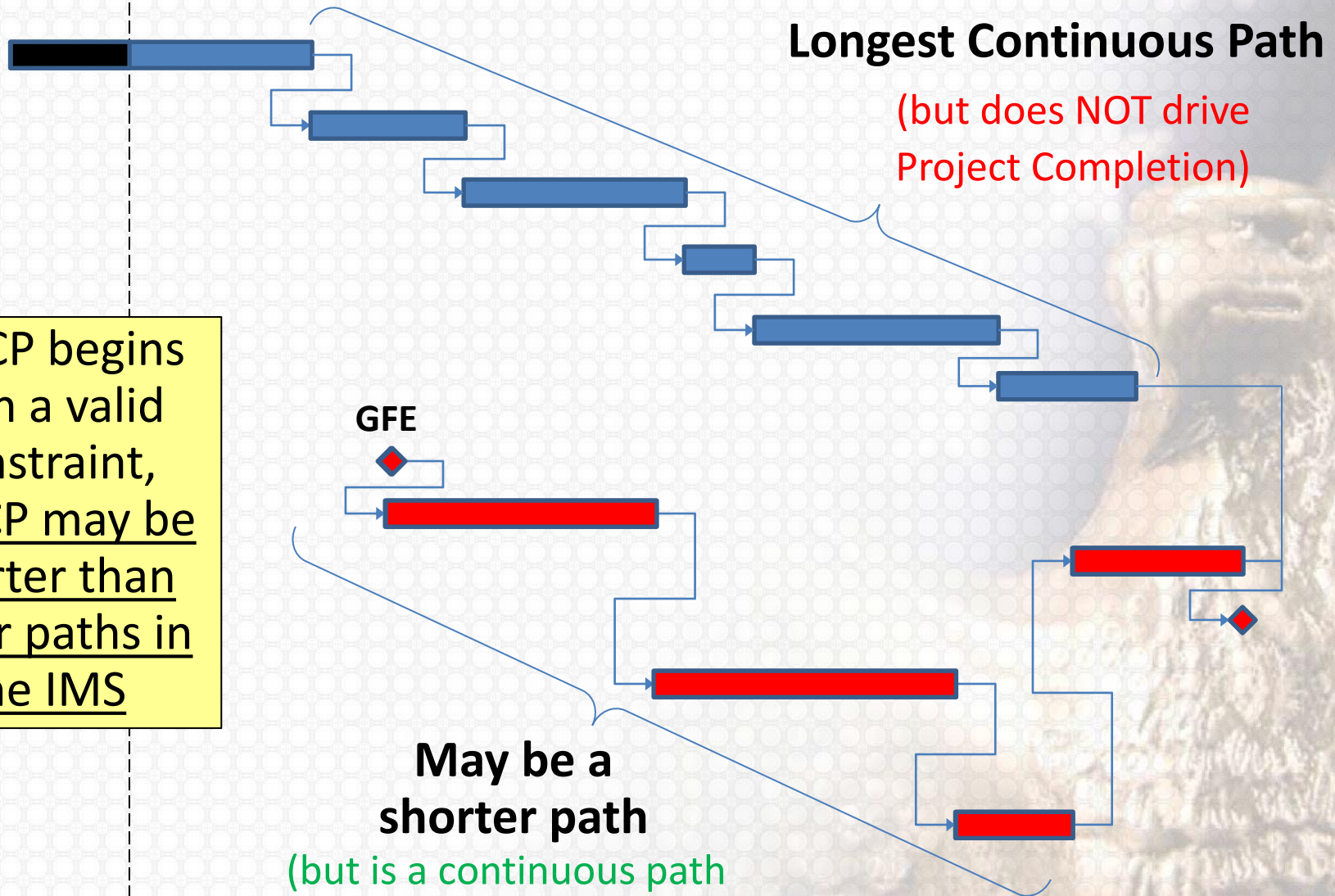
- Project Start
- In-progress Task
- Time Now
- Constrained Task

GFE (or some other constrained external schedule influence)



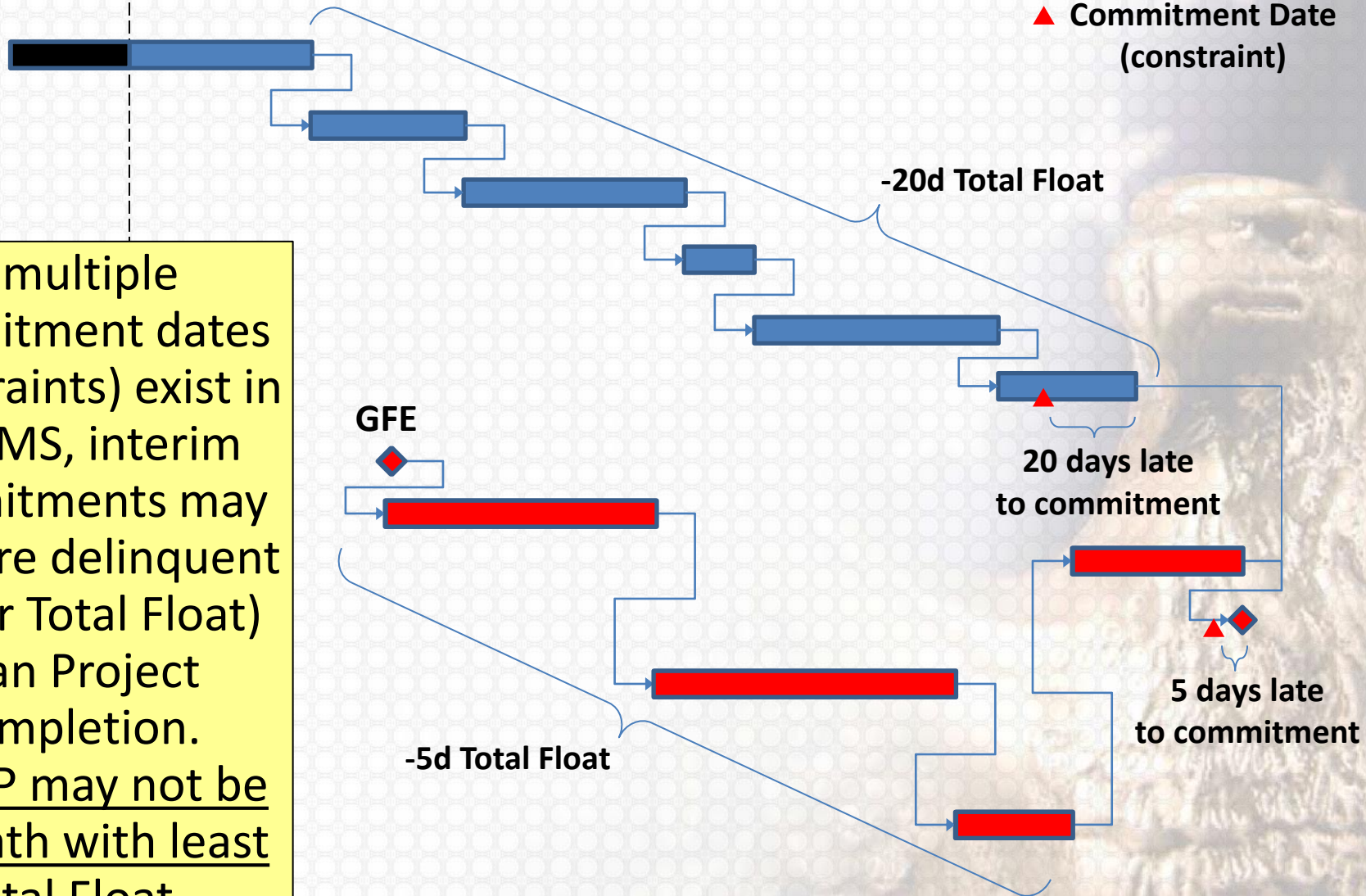
If a CP begins with a valid constraint, the CP may not stretch back to Time Now

Critical Path Determination



Critical Path Determination

If multiple commitment dates (constraints) exist in the IMS, interim commitments may be more delinquent (lower Total Float) than Project Completion. The CP may not be the path with least Total Float.



Critical Path Determination

Critical Path Characteristic	Common	Defining
Starts at Time Now	Yes	No
Longest Path in the IMS	Yes	No
Path with the least Total Float	Yes	No
Series of tasks driving Project Completion	Yes	Yes

PASEG v4

Critical Path = the longest continuous sequence of tasks from Time Now to the program end date. A delay to any task on the critical path should result in a corresponding delay to the project end date.



PASEG v5

Critical Path = the continuous sequence of tasks which determines the program end date. These tasks prevent the program end date from finishing sooner.

Additional Information:
[if the Critical Path does not start at Time Now], the driving path to the soft constraint should be reviewed if the information is available.

Consistent approach to Driving Path definition.
“Program end date” is replaced with “interim program milestone/ task.”

Questions?