

Project Scheduling Rules

Generally Accepted Rules According to PMI and DoD

Scheduling

by Nader Khorrami Rad, PMP

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1st edition

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By Nader Khorrami Rad, PMP

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The author has tried to be as objective as possible but might have been influenced by his personal experiences and preferred practices.

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About this eBook

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Nader Khorrami Rad, PMP

Feb 2012

About the Author

I have been working in the project planning and control field, since 1997. I have a Civil Engineering BS and a Philosophy of Science MS (I know you would ask me about it if we were speaking face to face; I just love analytical philosophy and that's why I chose this major; it has nothing direct to do with my job). I have Project Management Professional (PMP), Certified ScrumMaster (CSM) and Professional ScrumMaster I (PSM I) designations. I've experience with different kinds of construction and plant projects to date. I'm not active in software development but I've spent a lot of time on the Scrum framework because I believe that it's possible to have a synthesis of the traditional project management method and Agile frameworks for projects other than software development.

I'm the author of 35 books which are all written in Persian, and this is my first work in English. You can find the list of books I've authored in my [LinkedIn profile](#), if you like.

Introduction

The audience I had in mind when I was writing this book was mainly the project planning and control engineers, leaders and managers. This information would also be helpful for other project management team members.

Applying the rules might increase the length and effort of your initial planning, but trust me, it would buy you back a lot of time in schedule maintenance and control.

Scope of this eBook

These rules are about detailed plans. If you are using rolling wave planning or planning by stages you might need to interpret them before applying.

These are all abstract rules which are helpful for planning personnel; some other rules and recommendations exist which you should apply to your work, but they are not covered here. For example, we will discuss how much the maximum duration of activities should be, but we won't talk about other things such as duration padding and best practices in duration estimating.

Finally, this book is all about planning and does not cover anything about control.

Resources

The main resources used in this book are:

- A Guide to the Project Management Body of Knowledge (PMBOK Guide), 4th edition, PMI
- Practical Standard for Scheduling, 2nd edition, PMI
- Planning and Scheduling Excellence Guide (PASEG), Draft 1.1b, National Defense Industrial Association
- 14-Point Schedule Assessment, USA Defense Contract Management Agency (DCMA), 2011

The last two resources are referenced here as DoD documents (with some degree of tolerance).

Some other resources also had minor influences in this eBook.

Rule 1: Document the Scheduling Methodology

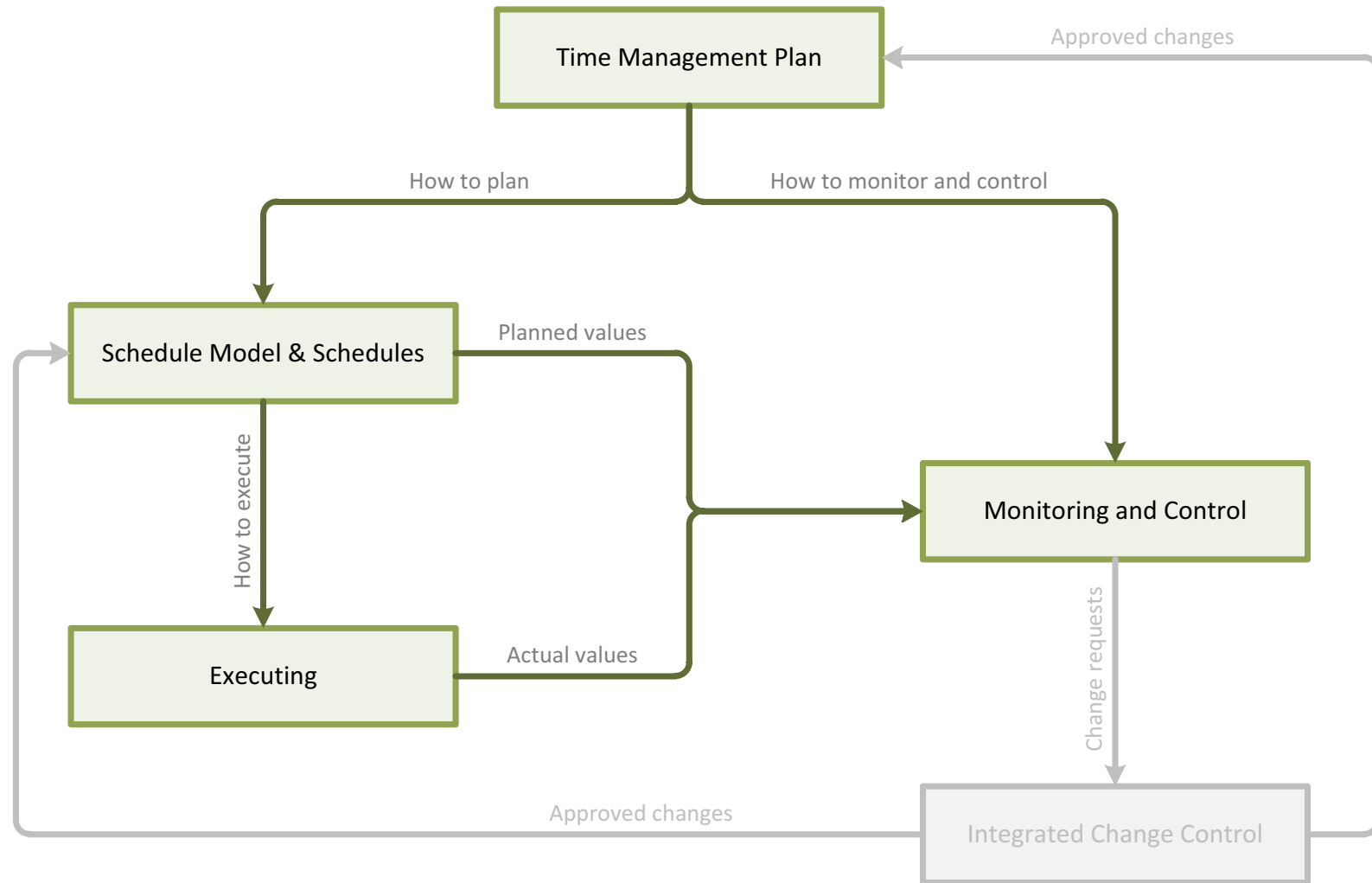
When you are preparing yourself to start scheduling, you probably have a vision of the whole process. I don't know if your organization makes you document them or not, but almost all standards and codes tell you that you should do so. This document might be named the Time Management Plan, Planning Methodology, Scheduling Methodology, Planning and Control Methodology, etc.

This document answers questions like: what software will we use? How detailed will our plan be? What control periods will we have? What parameters should we use to monitor performance?

Preparing a time management plan is like planning the planning period; whenever you want to take control you have to have some kind of plan; if you want to take control over the planning period, plan the period!

You'd better hand this document over to the key stakeholders and get their approval. This decreases the chance of misunderstandings and reworks in the future.

The diagram on the next page shows a little part of the project management system which is involved in scheduling.



Rule 2: The Schedule Should Have a Complete Scope

Your schedule should reflect the whole scope of the work of the project, nothing less and nothing more. When we are talking about project scope this is not limited to works needed to produce deliverables; we need to do some extra work to ensure that we will have what we are expecting (quality activities), we won't miss opportunities, and we can face threats (risk response activities) and so on.

Let's review the whole scope planning process: We start by identifying goals. We then go for the requirements; requirements tell us how we expect to reach the goals. The next step is to define the product scope and product breakdown structure; this will give us a complete view of the final product and all its elements. The last step is to convert product elements to works needed to create them and add the extra works (e.g. quality and risk response works) which produce our project scope and work breakdown structure.

The work breakdown structure is a hierarchical structure of our deliverables; we should then ask ourselves what kinds of works we should do to produce each deliverable and the answer is our activity list.

There are two rules for creating WBS:

- it should be based on deliverables (and not the work)
- it should cover 100% of the scope, nothing less and nothing more

The 100% rule is not just about the whole WBS; it's also applicable to each WBS element. If you call an item "structure" it should contain all the structures in the project, nothing less and nothing more.

The lowest level of WBS which hosts the activities is usually called the work package. When you are about to break down a work package to activities you should be careful to add every work needed to produce that deliverable underneath.

This rule applies to all situations. For example, if stakeholders agree on some strategic changes and tell you to prepare a new plan for the remaining of the work, what should you do?

Some planners prepare a new plan which covers only the remaining parts. This is not a good choice. As long as you are working under the same old contract, your schedule should cover all of its scope. You should reschedule the remaining parts based on the new strategy instead of creating a new incomplete plan. If you need to report the performance of the remaining parts you can easily calculate them in a complete plan.

Rule 3: Be Careful with Level-of-Effort Activities

There are some special activities in every project which don't produce any product by themselves and just support other activities to do their job. Project management, supervision, and accounting are examples of this kind of activity. These activities are called Level-of-Effort or LOE for short.

Hosting LOEs in schedules is not as easy as normal activities and they barely make any difference in the monitoring and control processes. That's why some planners prefer not to enter them in their schedules. DoD forbids the use of LOEs in some cases.

If you want to have a complete scope in your schedule you have to enter LOEs; that's why PMI doesn't forbid them but says that you should be careful with LOEs because they should never be critical.

LOEs do not have any specific and independent duration; their start and finish points are based on other activities. You would never be behind schedule in LOEs as they are ongoing, everyday works. That's why it's not acceptable for them to be critical. Besides that, if your LOEs become critical, some other really critical activities would become non-critical, and that's the main problem. It's also better for LOEs not to have predecessors or successors (if your planning software allows).

If you use Primavera P6, you would not have to be worried about LOEs because P6 has an LOE type and handles everything. Microsoft Project users should use some tricks to create well-formed LOEs.

Rule 4: Activities Should Have Unique Names

When you are naming activities, you should do it in a way that anyone in any situation could understand. Select an activity, take it out of the WBS and see if you can understand it.

The most important rule in this area is to have unique names. Take a look at this table:



Names are not unique

Fifth floor

Build columns

Build sheer-walls

Build slab

Sixth floor

Build columns

Build sheer-walls

Build slab



Names are unique

Structure of the fifth floor

Build the columns of the fifth floor

Build the sheer-walls of the fifth floor

Build the slab of the fifth floor

Structure of the sixth floor

Build the columns of the sixth floor

Build the sheer-walls of the sixth floor

Build the slab of the sixth floor

It takes more time to write down the complete and unique names, but believe me, it worth the effort. You can easily make a mistake and link the sixth floor slab to another activity instead of the fifth floor slab, but if you use unique names you will easily find your mistakes.

There are always many different ways of showing the activities. You can make alternative breakdown structures for your different needs and in these views you would not have WBS elements anymore; if activity names are unique, you can understand them outside the WBS, but otherwise you would not be able to use alternative breakdown structures in an efficient way.

Rule 5: Activity Names should have a verb

Work Breakdown Structure shows the scope. WBS elements are deliverables and you decompose them into different kinds of work needed to produce those deliverables. Activities are works which produce deliverables (WBS elements).

As you can see, WBS elements and activities are two completely different entities. This difference should be reflected in their names.

Check these two names:

1. Prepare shop drawing for the structure of the second floor
2. Shop drawing of the structure of the second floor

Which one is suitable for WBS elements and which one is suitable for activities?

The first one has an action and shows a work; therefore, it can be used for activities.

The second one points to a thing (the drawing), to a deliverable; therefore, it can be used for WBS elements.

In order to show a work, you usually have to use a verb or something equivalent.

Rule 6: Each Activity Should Have at Least One Predecessor and One Successor

Most planners know this rule:

Each activity should have at least one predecessor, except the first one

And

Each activity should have at least one successor, except the last one

When we talk about activities, we mean activities and milestones. If you don't imply this rule, some of the activities would be out of the network and would not be able to influence other activities or would be influenced by others, and this works against the reality of the project work.

If you don't obey the rule, these would be the minimum problems you would face:

- your future schedules would not be realistic
- your performance information and delays analysis would not be realistic

It's recommended to have at least two contractual milestones in every schedule: the start milestone and the finish milestone. In most cases "The effective date of contract" is the start milestone and "The provisional acceptance" or "The final acceptance" is the finish milestone. In this case, the start milestone would not have a predecessor,

and the finish milestone would not have a successor, and all other activities and milestones need at least one predecessor and one successor.

Always check the integrity of your network logic by this rule. If it fails you will realize that you've missed some of the relationships. It's common for planners to miss non-driving relationships (those which do not change schedules in the planning phase), and you should be careful with them.

In the end:

- if you believe that a specific activity or milestone does not have any predecessor (it can start on the first day of the project), make the start milestone its predecessor
- if you believe that it has no successor (it can finish on the last day of the project, and no other work will get into problems), make the finish milestone its successor

Unfortunately, some planners know this rule, but the only thing they do is to make the start milestone the predecessor of all activities that do not have other predecessors and make the finish milestone the successor of all the activities that do not have other successors. This is cheating! You should always analyze and find the missing relationships. If you are about to review a plan you can easily check to see if some items have too many predecessors or successors, they usually show this kind of cheat.

Level-of-Effort activities are exceptions; you don't have to have predecessors and successors for them. Some planning software implements them with relationships (like Primavera P6) and you have no control over it (that's fine). If you are using other software (like Microsoft Office Project), and you can avoid relationships for LOEs you should try to do so.

All I've mentioned before in this rule is the PMI way. In DoD, you are able to have at most 5% of activities without predecessors or successors.

Before ending this rule, I should mention the way Microsoft Office Project, and some other planning software behaves with relationships. In this kind of software you are allowed to have summary tasks as predecessors and successors; in this case:

- All predecessors of a summary task would act as predecessors for all its children.
- All successors of a summary task would act like successors for all its children.

As a result, you might have some activities without direct relationships which inherit them from their upper-level summary tasks. These kinds of predecessors and successors are also enough for this rule, and you do not need to worry; but have in mind that most resources recommend you shouldn't use such relationships because they are harder to manage and you might be subject to lots of mistakes.

Rule 7: Activities should not be Dangling

Implementing the previous rule is necessary, but it's not enough. In order to have a dynamic, live and effective plan, each activity's start should be influenced by other activities and the activity's finish should influence other activities; otherwise, the activity would be called dangling.

Let's see an example:



Activity B has a predecessor of type FS and a successor of type SS, and it's acceptable regarding the previous rule (rule number 6). However, what happens if B ends up much longer? This would be the result:



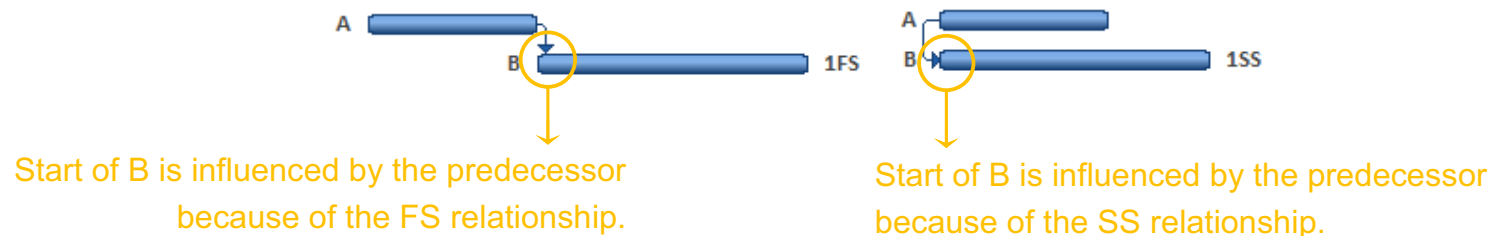
Activity B's finish date does not influence anything in the schedule. Is it right? Almost all finish dates in a real project influence something; it just doesn't seem natural to have dangling activities. If you have a lot of dangling activities, you might not have realistic forecasts and you would not be able to calculate a realistic time delay.

This is the rule for avoiding dangling activities, according to PMI and DoD:

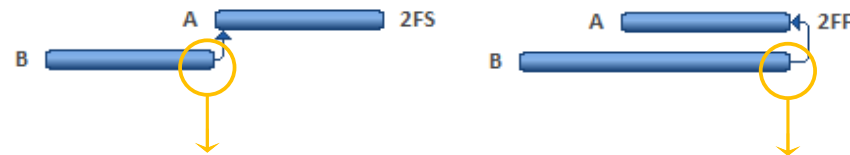
Activity should have at least one FS or SS predecessor and at least one FS or FF successor.

You are not obliged not to have any dangling activities, but you are strongly recommended to decrease their number as much as you can. I believe your dangling activities should be less than 1%.

Back to the rule; the FS and SS relationships influence the successors start date:



The FS and FF successors are influenced by the activity's finish date:



Finish of B influences the successor because of the FS relationship.

Finish of B influences the successor because of the FF relationship.

Besides avoiding dangling activities, there are two other important things we have in this rule:

- The only effective relationship in both scenarios is FS. Later on, you will see that you should try to use FS relationships most of the time. If you do so you will not need to be afraid of creating dangling activities.
- Did you realize that one of the four relationship types are missing in this rule? That's SF. We will discuss in other rules that you'd better avoid SF relationships. This relationship is not effective for influencing and being influenced.

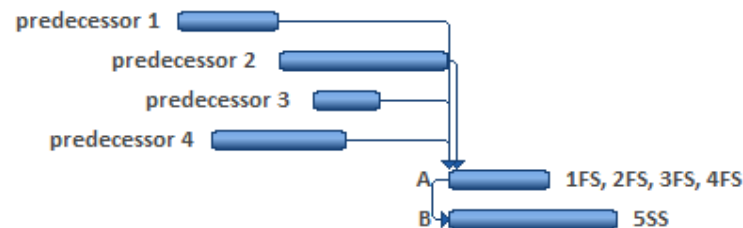
Rule 8: Most Relationships should be FS

PMI says that you should use FS relationship for most of your activities. DoD's rule is that at least 90% of activities should have FS predecessors.

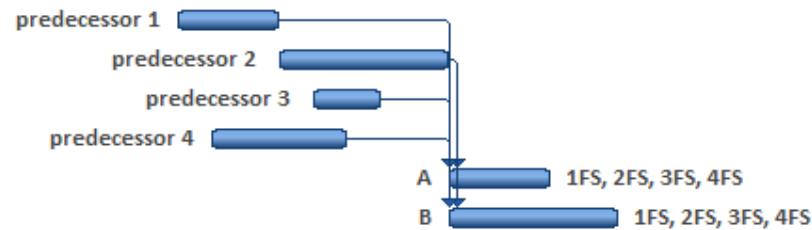
When scheduling was first modeled with the Arrow Diagramming Method, the only relationship was FS. Later on, the other three kinds of relationships found their way into scheduling. The fact is that most realities are best modeled with FS.

Some planners are used to using all the relationships, especially SS. The most common use of SS is when you hear this: ... and activity B starts at the same time as activity A...

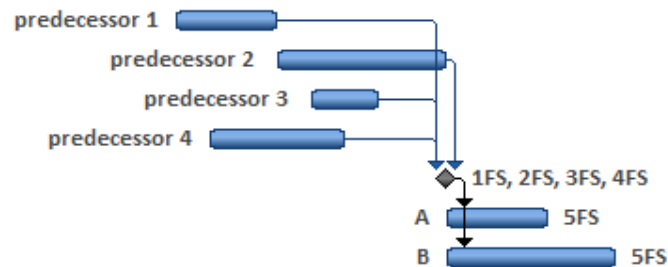
And you make an SS relationship for B.



When you do this, the meaning is that B cannot start unless A has started. Is it the case? Usually no. When people say that B starts at the same time as A, they usually mean that B has the same predecessors as A, and as a result the right choice would be this:



You will need to enter more relationships in this case. For example, if you have 16 predecessors for A, you will have to enter all of them for B. You can also use a milestone instead. Give all the predecessors to the milestone and make A and B the successors of that milestone.



When you have lots of successors based on lots of predecessors, you actually have an important event and you'd better design a milestone for that. This kind of milestone is sometimes called a toll-gate milestone.

Another example: activity A and activity B have 10 days duration, and activity B has a 50% overlap with A.

You might use SS+5days for B; but FS-5days is a better one.

These were just examples of replacing some of the SS relationships with better choices of FS. You might find other replacing scenarios yourself. Always count the number of activities with FS relationships; if they are less than 90% of all activities your network logic is not good enough.

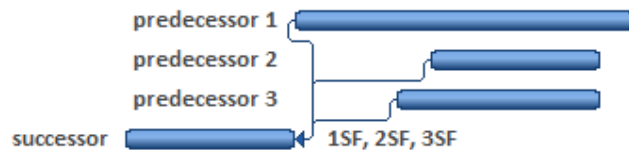
Rule 9: Try not to Use SF Relationship

PMI recommends you to use SF as little as possible. DoD completely bans the SF relationship.

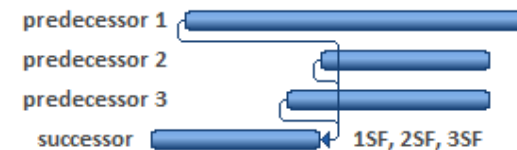
SF is a strange relationship. The first impression is that this relationship puts the activity before the predecessor. For example:



So, what happens if we have more than one predecessor?



What some people expect

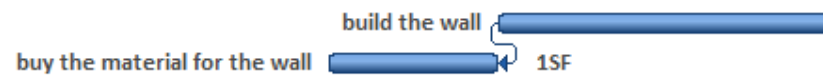


What really happens

Some people expect the successor to finish before the earliest predecessor, but it finishes before the latest predecessor. An SF relationship says that the successor should not finish unless the predecessor has started; in other words, the successor should not be earlier than a certain date. When you have three SFs, it means that

your successors should finish when all three predecessors have started which means the latest start time for all the predecessors.

When people start learning planning they are always trying to find good samples of this relationship. One sample is procurement. Suppose that we have to build a wall and we have to buy the materials. When should we buy it? It's possible to buy it when the project starts, but we usually prefer to buy it later so we don't have to store that material for a long time. This sample shows the activities based on an SF relationship:



Now the procurement activity is scheduled in a way that finishes right before the start of the construction activity. It's a good schedule, but what happens if we can't buy the material in time? This schedule shows the result:



We've started the procurement activity on time but have realized that it will take much longer than expected. Now the construction schedule did not change, but is it right? Of course not; we can't start construction until the procurement activity is finished.

An SF relationship is not a decent choice in this scenario. What is a good scenario for SF? Well, nothing! You'd better not use it at all.

Rule 10: You should not Use Large Lags

Imagine a two years long project with a relationship like FS+180days; what does it mean? What's the meaning of an FS relationship which has to wait 180days until the start of the predecessor?

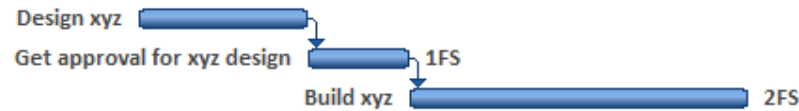
I'm sure you won't be able to give a suitable interpretation for that. There is no interpretation for long lags, there's nothing in reality which you can model with these kinds of relationships. So why do people use them? The answer is simple: they don't design relationships well enough. Please be reminded that our responsibility is not preparing a static schedule for a specific time, our goal is to design and build a living, dynamic schedule model which can produce meaningful schedules all the time.

PMI says that you should be careful with lags and do not use them instead of activities or complicated relationships. DoD forbids you to use lags longer than 5 working days.

Let's have an example: we have an activity such as "design xyz" and another activity like "build xyz" and a relationship of FS+20days. The 20 days is the time needed for design approval.

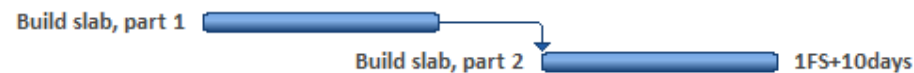


This lag is not acceptable in DoD terms. We can use this alternative:

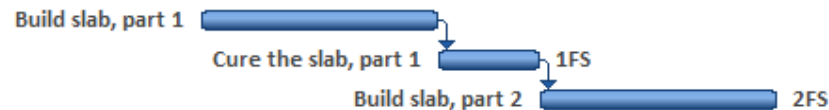


This schedule is easier to understand and manage and doesn't use any lags at all.

Another example: we have an activity such as “build slab, part 1” and another one such as “build slab, part 2”. They are built one after another, but they use the same set of frameworks and as a result we would need some delay for the concrete to cure. This would be some planners' choice:



And we are going to use this alternative to avoid lags:



We would have a great opportunity in this case: how long does it take for the slab concrete to cure? It actually depends on temperature, and temperature itself is dependent on the time of year, ranging from say 3 days to 15

days. We can enter 3×24 hours for this task and design a special 24 hour per day calendar for it. This calendar has 24 hours per day in summer and decreases in other seasons until reaching 4.8 hours a day in winter. Now this 3×24 hour activity will automatically be finished in 3 calendar days in summer and in 15 calendar days in winter. Isn't that great? This would be the kind of schedule model we call living and dynamic.

What we implement by lags is usually a more complicated and dynamic entity which should be treated as an activity.

I don't know if you are going to accept the DoD's rule or not; but if you don't I suggest that you should keep a limit for your lags; 22 working days for example; but never use any lag which comes into your mind.

Rule 11: Use Lags as Little as Possible

As we discussed before, lags are not strong scheduling elements and you should be careful with them. The subject of the previous rule was the length of the lag, and now, we are going to pay attention to the number of activities having a lag.

It's not enough to limit the length of lags if you are using them in most activities. It's not natural to use them a lot. DoD's rule is that you should not use lags in more than 5% of activities.

Think about this. Is it hard to implement? If you think so, you should consider finding more relationships, adding the necessary constraints (if any), and finally, breaking down your activities to have more flexibility on relationships.

Rule 12: Be Careful with Leads

PMI treats leads like lags; you should be careful not to use large leads and use activities instead of them where possible. DoD is much tougher in this area and completely forbids the use of leads.

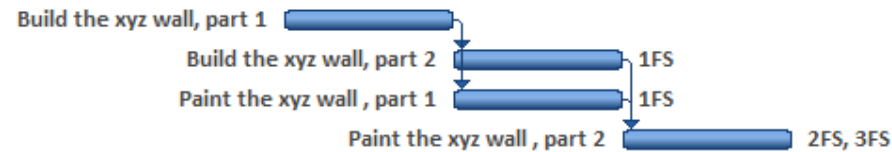
Why? And how?

Well, the reason is that leads are usually misused and hard to manage. In some situations, you start with an FS relationship; later on, you get behind schedule and you have to compress the schedule. You make that old FS relationship into an FS-5days. The same thing happens and FS-5days becomes FS-10days, FS-15days and... do you really have a strategy to actualize those overlaps? Some people do not have it. That's the misuse I was talking about.

So, does it mean that we should not use any overlaps? Not necessarily. Let's check this sample plan:

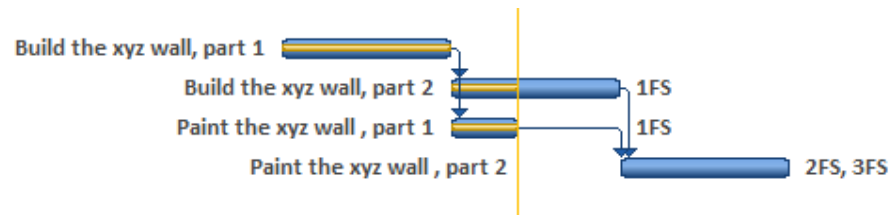


It's a wall that we are going to build and paint. We are not going to wait for the whole wall to be completed before starting the paint job: we want to overlap those two activities. If you want to accept the DoD rule, you can replace that plan with the next plan.

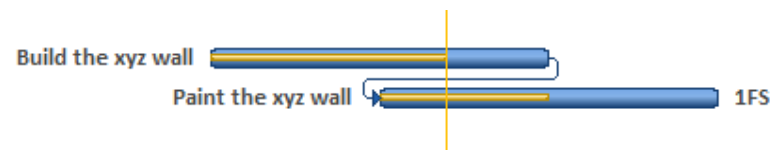


What we did here was break down each activity to two separate activities. When the building of the first part of the wall is finished, building the second part and the painting of the first part begins. When the building of the second part and painting of the first part is finished the painting of the second part starts.

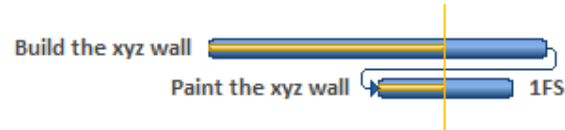
Now, imagine the painting of the first part. Our initial estimate was 5 days, and it happened to finish in 2 days. What happens? This would be the result:



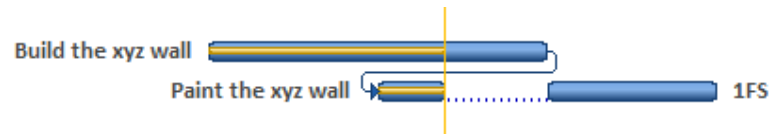
We've just entered the actual start and finish dates, plus duration % completed, and no other maintenance was involved. Now let's check what happens to the first alternative:



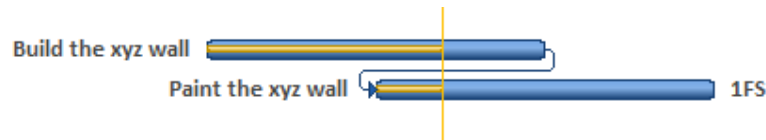
And we know that our actual progress should be compatible with the data date. In this case, our progress bar has passed the data date and it's not acceptable. What should we do? Should we change the painting duration? This would be the result:



And it's not acceptable; our painting has finished even before we finish building the wall. Here is another alternative:



This one is not good enough, because it uses splits. Another alternative:



This is not acceptable either because it tells us that we would paint the walls in the next three days, but are we going to be able to?

This example shows what I told you before, that schedules which use leads are harder to manage.

And finally, the question I'm always asked: Do you apply this rule yourself?

No, I do not. It's a good rule, but it's hard to apply. I use my own rule:

Use leads as little as possible, and if you have to use them do not use leads greater than 22 working days.

If you believe that you have to use lots of leads, especially large leads, you might need to reconsider the way you design relationships.

Rule 13: Be Careful with Negative Floats

This is a DoD rule and has no equivalent in PMI.

There are two types of schedules; I'm going to call them free schedules and fixed schedules.

In fixed schedules, you enter all the contractual dates as hard constraints. For example, if you have to finish the project on May 21st 2014, you should add a "Finish No Later Than May 21st 2014" or "Finish On Or Before 21st 2014" for your finish milestone. In this case, if you are behind schedule, your project finish date would still be May 21st 2014, but you will have a negative float. If you have a negative float of say, 50 days, it would mean that if you do the remaining parts of the project as planned you will finish 50 days after the contractual finish date.

In free schedules, you should never enter any hard constraint. In this case, your project finish date regularly changes and you should always check it with your baseline. For example, your project finish date might become Jul 10th 2014, and the variance between this date and the baseline date (May 21st 2014) would be 50 days and you realize that you are 50 days behind schedule.

Both methods are valid, and each has its own pros and cons. The free schedules are more common and easier to manage.

If you finish your initial planning and have a negative float in a fixed schedule, it would be similar to having a free schedule with a finish date that is not compatible with the contractual finish date; that's why having negative floats is not acceptable.

It has been seen that some planners do not have enough time to compress the schedule, and they have to issue the schedule. Some of them use a trick and add a "Finish No Later Than" or "Finish On Or Before" constraint to the finish milestone. In this case, the schedule seems compatible with the contract but the negative float will show the problem.

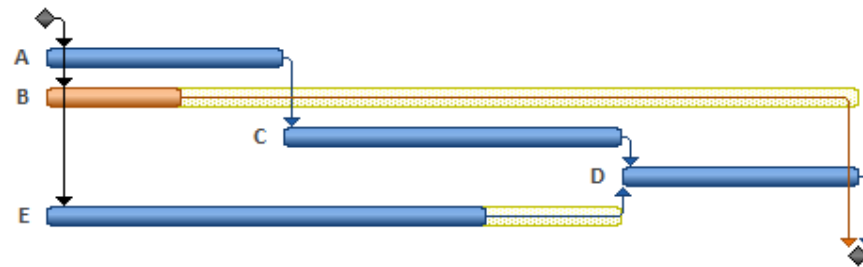
Rule 14: Activities should not Have Large Floats

You don't have any direct control on floats. Large floats are just a symptom of weak relationships.

Check activity floats; if they are larger than expected, you may realize that you've missed something. Perhaps some relationships are not implemented; maybe some of them are wrong, etc.

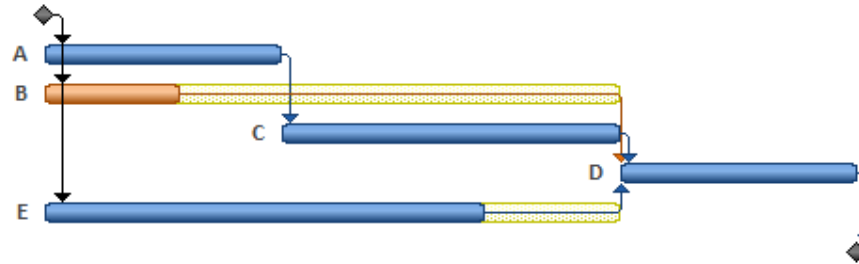
In DoD's terms, you should not have any floats longer than 44 working days (two calendar months). If so, you have to go back to all your scheduling elements and discover the problem.

The most common problem is not adding non-driving relationships. Take a look at this plan:



The yellow bar shows the total float. Activities B and E have floats and the others are critical. Activity B has a long float; but why? B is finished in the beginning of the project and has no successors except the finish milestone. What happens if B is not finished until the last day? When we ask ourselves, we might realize that D is the

successor. We didn't add D as a successor for B, because they are so far away, and we are almost sure that B will be finished when D starts. This kind of relationship is called non-driving. If we add the relationship the schedule would not change, but we will have a more realistic float on B:



When an activity has multiple predecessors, each of them has a specific tendency to push activity to the later dates. One of them has the most tendency and is called driving. If you delete all other relationships your predecessor would not move, but you will have two problems:

- Floats would not be realistic. When you delete a non-driving relationship the predecessor's float might increase.
- Drivers always change. One relationship would be a driver now, but tomorrow after updating the schedule, another relationship might become the driver. All non-driving relationships have the potential to become a driver someday, and if you don't add them your future schedules and evaluations would not be realistic.

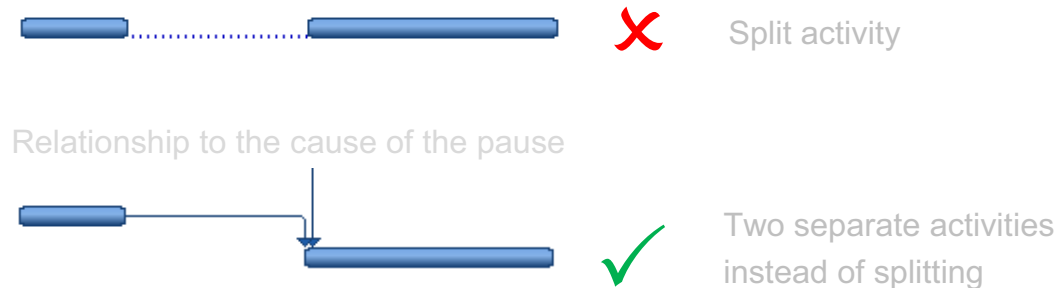
So, always check all the possible scenarios and add all relationships, even if they are not driving.

Rule 15: Do not Split Activities

Most planning software has a feature for splitting tasks, but this doesn't mean that you can split activities!

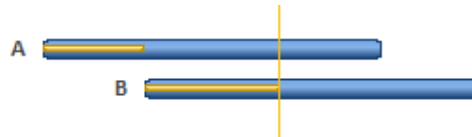
PMI forbids splitting activities because split activities are hard to manage and you cannot implement an effective logic for them.

Whenever you want to split an activity you should break it down into two separate activities instead.

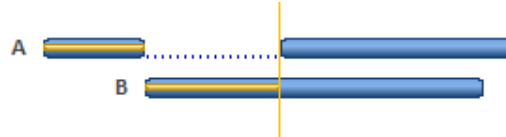


Why do you really have to split an activity? Activity starts, goes on, and then needs to pause until something else happens. That “something else” is a relationship you should have in your plan; you cannot apply this logic to a split activity, but you can apply it when you break it down into two activities.

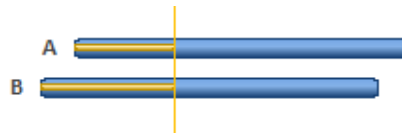
Splitting usually happens when you reschedule the plan. For example:



What happens if you reschedule this plan? The answer depends on your planning software and its preferences, but the most common answer is:



This is not a good result. In this case, the root problem is the way you've updated your schedule. Look at activity B; its progress is compatible with the data date (progress bar is as long as data date position), but there's something wrong with activity A. Maybe the actual start is not correct, and your update should be like this:



Or, maybe the actual start was correct, but you have to revise your remaining duration:



I'm not going to discuss updating processes and requirements, but I remind you that according to PMI and DoD, you have to enter these data for all activities in every update period:

- actual start (if it has started)
- actual finish (if it has finished)
- actual and remaining duration (if it's in progress)

If you enter all of them correctly, your activities will not split when you reschedule.

Rule 16: Do not Use a Lot of Date Constraints

Date constraints are not dynamic and you would not find any real date constraint in most projects. Some planners use them instead of relationships, and this is wrong.

PMI says you must be careful not to use date constraints in place of relationships.

DoD says that activities with hard constraints should not be more than 5% of all the activities.

What DoD means by hard constraints are those constraints such as “Finish No Later Than” or “Finish On Or Before” which keep activities from going to later dates.

As mentioned before, you probably do not need to use any date constraint in most projects. Sometimes a limitation seems like a constraint, but is actually some other scheduling element (usually a relationship or calendar property). Suppose that the project manager says that activity X cannot start before a certain date; will you use a constraint for that? Well, not always. You should check to see the reason behind that date. Maybe it has something to do with weather and seasons (that work cannot be done in winter), and you might be able to make a separate calendar for that activity and reflect those limitations instead of using a constraint.

Rule 17: Make Milestones for Date Constraints

This is not a PMI or DoD rule; this is my own rule which I find very useful, and I'm going to share it with you.

Date constraints are special; they are reflecting an important event in our plans. We are used to seeing events as milestones, so why don't we limit date constraints for milestones?

Suppose you have an activity. You cannot start it because of a regulation. This regulation says that you can only start the work after February 1st. What you probably do is to assign a "Start No Earlier Than February 1st" or "Start On Or Before February 1st" constraint to the activity. I prefer not to assign any date constraint to the activities. Instead of that, I make a new milestone named "Legal start date of ...", assign the constraint to that milestone and make the original activity a successor of the new milestone.

In this scenario, you will always remember the event when you look at the schedule because milestones are far more visible than constraints. Changing the constraint date will also be much easier, especially when you use it for more than one activity.

You'd better have a WBS element (or summary task) for your contractual and management milestones in the beginning of the schedule and should put these milestones there alongside the other milestones.

Rule 18: Activities should not have Large Durations

It's always a long story to how detailed our activities should be. You might have problems monitoring them, and it would be very hard to design an effective network of relationships if they are not detailed enough. If they are over-detailed we will have to spend more time planning and controlling.

The case is that if you over-break-down the activities, you would not lose as much as when they are under-break-down. That's why PMI and DoD are both more concentrated on the maximum allowed duration and not the minimum.

The maximum allowed duration in DoD's terms is 44 working days, equivalent to 2 calendar months.

The 44 working days seems like a good choice, but what about a 4 month long project? 44 days seems so long for a 4 month project. That's why the PMI uses a parameter. PMI says that you should not have durations longer than two control periods in any normal activity. So, if you have a regular two years long project and your control period is one month, your maximum allowed duration would be 2 calendar months; but if you have a 4 months long project, you might want to control it weekly and therefore, your maximum allowed duration would be 2 weeks.

PMI's rule is about normal activities, and this rule would obviously not be applicable to Level-of-Effort activities. DoD says that you can have 5% of activities with durations longer than the maximum allowed (44 working days).

Rule 19: Use Only One Duration Unit

There are many different time units; days, weeks, months, years, hours and minutes. How do you use them?

The most common unit is days, but planners sometimes use other units besides them. For example, most activities' durations are based on days, but some of them are based on months and hours.

DoD recommends you to use only one time unit. This is to simplify the schedule.