

The "Yellow Pad" Problem Solving Method

(or "white pad" based on your office supply inventory)

The 2009 Edition

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Background

The following list of steps associated with resolving data processing problems, presents kind of an action plan for pursuing any type of technical problem. It was originally written for programmers, but is clearly applicable to other situations as well. It's been refined to it's current level of lightheartedness by years, of pain and grief, and tempered with gallons of Malox. Each of us has different strengths and weaknesses, and this list merely attempts to suggest steps that everyone should take into account when trying to resolve technical problems. Most of us do some of these things innately, but few of us do them all well. The "Yellow Pad" philosophy suggests how important it is to have some degree of written information. Formality is not the issue, but jotting some of these things down can make all the difference in your success or failure. The next time you're trying to solve a technical problem, make sure you are taking maximum advantage of the ultimate computer..... your mind.

"Yellow Pad" - Required Steps

- 1) Understand the "Problem":*
- 2) Ask What Changed:*
- 3) Eliminate the Obvious:*
- 4) Be Humble:*
- 5) Ask for Help: Use Others*
- 6) Think Broadly, But Narrow The Solutions:*
- 7) Reconsider What You Eliminated:*
- 8) Develop The Options, The Steps, and Your Backout Plans:*
- 9) Go For "It" (Fix It):*
- 10) Document, Document, Document:*

Understand the "Problem":

We live in a world where everything may well just move too quickly. The greatest risk with solving these problems is our unwillingness to make sure we know what the problem is. Ensure that you truly collect all the symptoms that began to manifest about the same time. Maybe you do have more than one problem, but you're not going to fix any of them if you don't draw some correlations. For best results, take some notes so that you don't confuse the symptoms. Play Doctor..... You can't treat the patient if you don't know where it hurts and if it hurts in more than one place, you need to prioritize.

Ask What Changed:

Some bugs can lay around dormant for years. So, what changed may not be directly tied to a problem, but, as sure as the day is long, what changed at least "stimulated" the problem. You have to assume that any changes made are the culprit. Hopefully, the author of any changes has their "backout" plan readily available in case it is required. What's that you say..... "We don't need no stinking backout plan. It was a simple change!!!". For anyone you are working with that has that attitude, I have some "life" and "work" options that we should discuss privately. They need to be enlightened on just how their approach may be classified in any environment that wants dependable service. The backout might not even be on paper, but it must have been considered, thought through, and CORRECT.

Eliminate the Obvious:

Today's systems are so complex that you must try to quickly eliminate the things that a problem cannot stem from:..... (so you think - but remember; nothing is impossible) .

*This is a tricky one....., and it probably the place where **experience** pays the biggest dividends. You may even start in the wrong place and then in the later steps here, re-think the issues, but you **CAN'T** start by trying to solve every problem, so take your best shot at narrowing the focus!*

Be Humble:

*In this business, anyone who thinks that they know it all, will quickly be consumed by the world as it passes. You have to recognize that there is no shame in having a problem in anything so complex. You did something the way you did, because you thought it was right. It's very natural for that to provide a fundamental barrier to looking for problems with your actions. **Assume that you have made a mistake!** There is nothing wrong with living by the following three rules:*

- 1. You don't know it all.*
- 2. You might know it all, but made a "boo-boo".*
- 3. The know-it-alls who provided you with the stuff you were working with didn't really know it all.*

Ask for Help: Use Others

These may be your co-workers, newsgroups, vendors, user/customer participation, or whatever higher-power you may believe in. Just don't arrogantly and stubbornly sit around thinking that you are the only one who may have something to contribute. Opening up can have surprising results, as you actually save time, learn something, and make your users happy.

What a novel concept!

Think Broadly, But Narrow The Solutions:

This sounds like a conflicting, obtuse statement, and that's probably a fair assessment of the author's sometimes stumbling Gemini personality. More simply put, follow the old KISS (Keep It Simple, Stupid) philosophy. Try to solve the problem(s) with the minimal actions possible after considering the "big picture". Introducing complex or multi-faceted solutions may, in fact, make your ability to resolve the situation an even greater challenge.

Reconsider What You Eliminated:

Just as a checkpoint, take a quick look back now, and make sure that the "obvious" that you eliminated earlier, hasn't crept back in as a "possible" .

Develop The Options, The Steps and Your Backout Plans:

The most important work you have is to define the actions that you will take to actually attempt to resolve the situation. Jot down (OK, here's the "yellow pad" reference) the steps that you will be taking. More importantly, ensure that you know how to get back to exactly where you currently are if the problem becomes even more insidious. Letting one problem build on top of another will only make the puzzle more difficult to solve.

Go For "It" (Fix It):

*If you've done all of the above steps (whether in three minutes, or three days), you're ready to try, and the odds are in your favor. No one can fault your efforts at that point (though they might still fault your success rate). **Go and get it.** It's only when you shortcut these circumstances, that you reduce the likelihood of success. It's like driving defensively. You can't avoid every mishap, but you can minimize the risk and danger to yourself; and to not do so would be foolhardy.*

Document, Document, Document:

*This word is repeated three times in hopes of getting, at least, three words written up by many technical types. You will do yourself the most good, if you ensure that you have some cause/effect information to refer to in the future. The most common "post-incident" client question is, "How will you prevent this from re-occurring?". Be prepared to answer it. The data processing/telecommunications world is filled with variations on a theme, and any problem today will likely appear again in some form in the future. **Help yourself, please** (others will appreciate it too) .*

Huh???

If you can't follow the logic of why you would take the steps outlined here, then it's time to face up to the fact that you may not belong in a technical career field (and let's face it, pretty much everything is a technical field these days). If you can't follow the practice of the steps outlined here, then you are doomed to a lot of misery, and much aggravation on the part of your "customers". What's kind of interesting is that this document was first written in 1984, and, while that explains some of the nature of the language of the old goat that wrote it, the content is still reasonably accurate.

Give the "yellow pad" approach a try and see if your life and your customers' lives don't get a little easier.....!