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## getting what you want



### THE FINE ART OF PROPOSAL WRITING

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### THROUGHOUT THE LAST TWO YEARS

I have written a number of technical proposals for my employer. These usually concerned either the acquisition of new hardware or modifications to our current infrastructure.

Strangely enough, my colleagues didn't always achieve the same amount of success with their proposals as I did, which got me to thinking, "How does one write a proper proposal anyway?"

This mini-tutorial aims to provide a rough outline of what a proposal should contain, along with a number of examples. Throughout the document you'll also find a number of Do's and Don'ts to point out common mistakes.

The examples predominantly focus on the acquisition of hardware. This is due to the nature of my line of work, but let me say that the stuff I'll be explaining applies to many other topics. You may just as well apply them to desired changes to your network, some software that you would like to use, and even to some half-assed move that you want to prevent management from making.

I've never been a great fan of war, but Sun Tzu really knew his stuff! Even today his philosophies on war and battle tactics are still valid and are regularly applied. Not just in the military—these days it's not uncommon to see corporate busybodies reading *The Art of War* while commuting to work. In between my stuff you'll find quotes from Sun Tzu I thought were applicable to the subject matter.

### Zen and the Art of Getting What You Want

*"Though we have heard of stupid haste in war, cleverness has never been seen associated with long delays."*

Sun Tzu, *The Art of War*

It happens occasionally that I overhear my colleagues talking about one of their proposals. Sometimes the discussion centers on why their idea got shot down and the question, "What the heck was wrong with the proposal?" They had copied a proposal that had worked in the past and replaced some information with their own. When I ask them to show me said proposal, I'm presented with two sheets of paper, of which one is the quote from our vendor's sales department. The other consists of 30% header/footer, a short blurb on what we want to buy, and a big box repeating all of the pricing info.

The problem with such a document, of course, is that management gets its nose rubbed in the fact that we

want to spend their money (and loads of it, too). To them such a proposal consists of a lot of indecipherable technical mumbo-jumbo (being the quote and some technical stuff), with the rest of the document taking up money-Money-MONEY.

While to you it may seem that the four or five lines of explanation provide enough reason to buy the new hardware, to management this will simply not do.

In writing a proper proposal, it is essential to keep your organization's upper echelons in mind. However, don't forget about your colleagues, either. It is more than logical that you should run a proposition past your peers to see whether they agree with all of the technicalities.

In order to make sure that both your targets agree on your proposal, you will have to: (1) employ tech-speak to reach your peers; and (2) explain your reasoning in detail to your management.

To craft such a document, there are a number of standard pieces to the puzzle that you can put in place. I'll go over them one by one. One thing I want you to realize, though, is that drafting a proposal will take time. Expect to spend at least half a day on writing a modest proposal.

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## Pieces to the Puzzle

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My proposals tend to consist of several sections, some of which are optional, as not every type of proposal requires the information contained therein. For instance, not every project will require resources that can easily be expressed in numbers, and hence there may be no need for a list of costs. Here is the canonical list of proposal sections:

- Summary—Describes briefly your current problem, your solution for this, and the estimated costs.
- Introduction/scope—Gives your audience a clear picture of the troubled environment involved.
- Problems and proposed solutions—Describes in detail what is wrong, what the repercussions are (and what they may become), and your proposed solution.
- What is required—A list of things that you'll need to fix the problem.
- Other options—Of course, management wants the ability to save money. Here's where you give them the option to do so.
- Making it work—Describes which departments need to put in resources and what their tasks will be.
- Breaking things down—The costs of the various options set off against their merits and flaws.
- Final words—A last plea to your audience.

Now let's detail them.

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## THE SUMMARY

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*"The art of war teaches us to rely not on the likelihood of the enemy's not coming, but on our own readiness to receive him."* Sun Tzu, *The Art of War*

Keep this part as short and simple as possible. Use one, maybe two short paragraphs to describe the current situation or problem and describe how you'll fix it. Use very general terms and make sure that it is clear which of the reader's needs you are addressing.

Be very careful not to put too much stuff in this section. Its main purpose is to provide the reader with a quick overview of the problem you're trying to solve and your final goal. This allows the reader to grasp quickly the subject of your proposal and helps ensure that it will be found more easily on a cluttered desk. A short summary means quick recognition. Here is an example:

In the past year UNIX Support have put a big effort into improving the stability and performance capacity of their BoKS and NIS+ infrastructural systems. However, the oldest parts of our infrastructure have always fallen outside the scope of these projects and have thus started showing signs of instability. This in turn may lead to bigger problems, ending in the complete inaccessibility of our UNIX environment.

I propose that we upgrade these aging servers, thus preventing any possible stability issues. The current estimated cost of the project is \$16,260.

## INTRODUCTION/SCOPE

When it comes down to the technical nitty-gritty, most managers have only a broad view of things going on in the levels beneath them. That's the main reason why you should include a short introduction on the scope of your proposal.

Give a summary of the services that the infrastructure delivers to the "business." This helps management form a sense of its importance. If a certain service is crucial to your company's day-to-day operation, make sure that your reader knows this. If it will help paint a clearer picture, you can include a simple graphic on the infrastructure involved.

The whole point of this section is to imprint on management that you are trying to do something about their needs, not yours. It's one thing to supply you with resources to tickle one of your fancies, but it's a wholly different thing to pour money into something that they themselves need. Here's an example:

BoKS provides our whole UNIX environment with mechanisms for user authentication and authorization. NIS+ provides all of the Sun Solaris systems from that same environment with directory services, containing information on user accounts, printers, home directories, and automated file transfer interfaces.

Without either of these services it will be impossible for us to maintain proper user management. Also, users will be unable to log in to their servers should either of these services fail. This applies to all departments making use of UNIX servers, from Application and Infrastructure Support all the way through to the Dealing Room floor.

## PROBLEMS AND PROPOSED SOLUTIONS

*"Whoever is first in the field and awaits the coming of the enemy, will be fresh for the fight; whoever is second in the field and has to hasten to battle will arrive exhausted."* Sun Tzu, *The Art of War*

When writing your proposal, try to keep others' perspectives in mind. Try to anticipate any questions your reader might have and introduce your ideas in a way that will appeal to your audience. If you simply describe your goal instead of providing proper motivation, you'll be the one who "is second in the field."

In the previous section of your document you provided a quick description of the environment involved. Now you'll have to describe what's wrong with the current situation and what kind of effects it may have in the future. If your proposal covers the acquisition or upgrade of multiple objects, cover them sepa-

rately. For each object, define its purpose in the scope you outlined in the previous section. Describe why you will need to change its current state and provide a lengthy description of what will happen if you do not.

However, don't be tempted to exaggerate or to fudge details so that things will seem worse than they are. First, a proposal that is overly negative may be received badly by your audience. Second, you will have to be able to prove all of the points you make. Not only will you look like an ass if you can't, but you may also be putting your job on the line! So try to find the middle road. Zen is all about balance, and the "art of getting what you want" should also be. Here's an example:

Recently the master server has been under increased load, causing deterioration of both performance and stability. This in turn may lead to problems with BoKS and with NIS+, which most probably will lead to symptoms like: Users will need more time to log in to their UNIX accounts; users may become unable to log in to their UNIX accounts; user accounts and passwords may lose synchronicity.

Close off each subsection (one per object) with a clearly marked recommendation and a small table outlining the differences between the current and the desired situation. Keep your recommendation and the table rather generic. Do not specify any models or makes of hardware yet.

The example below is focused on upgrading a specific server, but you can use such a table to outline your recommendations regarding just about anything—versions of software, for example, or specifics regarding your network architecture. It will work for all kinds of proposals:

UPGRADES: UNIX Support recommends upgrading the master server's hardware to match or exceed current demands on performance.

<i>Current</i>	<i>Recommended</i>	
<i>System type</i>	Sun Netra T1 200	—
<i>Processor</i>	Ultrasparc IIe, 500MHz	2x Ultrasparc IIIi, 1GHz
<i>Memory</i>	512MB	1 or 2GB
<i>Hard drives</i>	2x 18GB + 2x 18GB ext.	2x 36GB, int. mirror

The point of this section of your proposal is to convince your readers that they're the captain of the Titanic and you're the person who can spot the iceberg in time. All is not lost. Yet.

#### WHAT IS REQUIRED TO MAKE THIS WORK?

*"The general who wins a battle makes many calculations in his temple ere the battle is fought. The general who loses a battle makes but few calculations beforehand."*  
Sun Tzu, *The Art of War*

Now that you have painted your scenario, and you've provided a vision of how to go about solving things, you will need to provide an overview of what you will be needing.

Don't just cover the hardware you'll need to acquire, but also take the time to point out which software you'll need and, more important, which departments will need to provide resources to implement your proposal. Of course, when it comes to guesstimates regarding time frames, you are allowed some slack. But try to keep your balance and provide your audience with an honest estimate.

One thing, though: Don't mention any figures on costs yet. You'll get to those later on. Here's an example of what it takes to get "it" to work:

A suitable solution for both Replica servers would be the Sun Fire V210. These systems will come with two Ultrasparc II processors and 2GB of RAM installed. This configuration provides more than enough processing power, but is actually cheaper than a lower spec'd V120.

#### OTHER OPTIONS

*“Do not interfere with an army that is returning home. When you surround an army, leave an outlet free. Do not press a desperate foe too hard.” Sun Tzu, The Art of War*

The above quote seems to be embodied in one of Dilbert's philosophies these days: “Always give management a choice between multiple options, even if there is only one.”

Of course, in Dilbert's world, management will always choose the least desirable option, for instance choosing to call a new product the “Chlamydia,” because “it sounds Roman.” It will be your task to make the option *you* want to implement the most desirable in the eyes of your readers.

In case your proposal involves spending money, this is where you tell management: “All right, I know times are lean, so here are a number of other options. They're less suitable, but they'll get the job done.” Be sure that even these alternatives will do the job you want them to. Never give management an option that will not be usable in real life. Here's an example:

Technically speaking, it is possible to cut costs back a little by ordering two new servers instead of four, while re-using two older ones. This alternate scenario would cut the total costs back to about \$8360, saving \$3300.

If the main subject of your proposal is already the cheapest viable option, say so. Explain at length that you have painstakingly eked out every penny to come up with this proposal. Also mention that there are other options, but that they will cost more money/resources/whatever. Feel free to give some ballpark figures. Here's an example:

Unfortunately, there are no cheaper alternatives for the Replica systems. The Sun Fire V120 might have been an option, were it not for the following facts:

- It is not in the support matrix as defined by UNIX Support.
- It is not natively capable of running IP Multi Pathing.
- It will reach its so-called End of Life state this year.

Basically, you need to make management feel good about their decision to give you what you want. You really don't want them to pick any solution other than the one you're proposing, but you are also obliged to tell them about any other viable possibilities.

#### MAKING IT WORK

For some projects, you are going to need the help of other people. It doesn't matter whether they are colleagues, people from other departments, or external parties. In this section you will make a list of how many resources you are going to need from them.

Instead of going into heavy details, just give a broad description of the tasks laid out for these other parties. Estimate how many hours it will take to perform these tasks and how many people you will need from each source. Such a list will not only give management a clear picture of all of your necessities, but will also provide your readers with the scale of the whole project. Here's an example:

In order to implement the proposed changes to our overall security we will require the cooperation of a number of our peer departments:

- Information Risk Management (IRM) will need to provide AS and our customers with clear guidelines, describing the access protocols which will be allowed in the future. It is estimated that one person will need about 36 hours to handle all of the paperwork.
- Security Operations (GSO) will need to slightly modify their procedures and some of the elements of their administrative tools to accommodate the stricter security guidelines. It is estimated that one person will need about 25 hours to make the required alterations.

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## Breaking Things Down

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You'll need to make this section as short as possible, since it covers the costs of all of the viable options that you provided in previous sections. Create a small table, setting off each option against the costs involved. Add a number of columns with simple flags you can use to steer the reader to the option of your choice.

Perhaps it will help clarify to recall product comparison charts in consumer magazines or sites on the Web. In comparing products they often include a number of columns marked with symbols like + (satisfactory), ++ (exceeds expectations), – (not too good), or – – (horrific). This will allow you to compare a number of distinct qualities in the options before you.

It goes without saying that you should be honest when assigning these values. If another option starts to look more desirable by now, you really have to re-evaluate your proposal. For example:

System	Hardware	Costs*	Current Needs	Expected Growth
Master	V240, 2x CPU, 2GB RAM, 2x 36GB HD, 1x DVD	\$6,638.10	+	+
Master-alt	V480, 2x CPU, 4GB RAM, 2x 36GB HD, 1x DVD	\$20,575.00	++	++
Replica	V210, 2x CPU, 2GB RAM, 2x 36GB HD, 1x NIC	\$4,811.10	++	++

\*Price per unit. Multiply by amount of systems to get full price.

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## FINAL WORDS

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*“The clever combatant imposes his will on the enemy, but does not allow the enemy's will to be imposed on him.” Sun Tzu, The Art of War*

Use two or three concluding paragraphs to impress your reader with the force of your arguments. Shortly summarize the change(s) that you're proposing and repeat your arguments. Be firm, yet understanding. Here's an example:

We have provided you with a number of possible scenarios for replacement, some options more desirable than others. In the end, however, we are adamant that replacement of these systems is necessary and that postponing these actions may lead to serious problems within our UNIX environment, and thus in our line of business.

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## Regarding Tone and Use of Language

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Keep in mind at all times who your target audience is. It is quite easy to fall back into your daily speech patterns when writing an extensive document; at some point that may lead to catastrophe.

Assume that it is all right to use daily speech patterns in a document that will not pass further than one tier above your level (meaning your supervisor and

your colleagues). However, once you start moving beyond that level you will really need to tone it down.

Some points of advice:

- Avoid expletives at all times.
- Avoid using technical slang. Of course you're free to use standard technical terms, but leave out terms such as "boxen," "a win" (or "winnitude," for that matter), and "kludge."
- Avoid overly long sentences. This is a trap I fall into quite easily myself, as you may have noticed while reading this article. It tends to make it difficult to follow a train of thought.
- Don't be afraid to use your vocabulary. Words like "adamant" and "imperative" tend to have more impact than "I'm very sure" or "It is important."

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## Regarding Versioning and Revisioning

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At ING Bank we include a small table at the beginning of each document which outlines all of the versions that document has gone through. It shows when each version was written and by whom. It also gives a one-liner regarding the modifications, and each version has a separate line showing who reviewed the document.

Of course, it may be wise for you to use different tables at times: one table for versions that you pass between yourself and your colleagues and one for the copies that you hand out to management. Be sure to include a line for the review performed by your supervisor in both tables. It's an important step in the life cycle of your proposal.

This may be taking things a bit far for you, but it's something we've grown accustomed to.

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## Final Thoughts

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*"Begin by seizing something which your opponent holds dear; then he will be amenable to your will."* Sun Tzu, *The Art of War*

In other words, management is almost sure to give in if you simply make sure they know things will go horribly wrong if you are not allowed to do what you just proposed.

Of course, no method is the be-all and end-all of writing proposals, and mine is no exception. Some may simply find it too elaborate, while in other cases management may not be very susceptible to this approach. Try to find your own middle road between effort and yield. Just be sure to take your time and be prepared for any questions you may get about your proposal.