Tips for Documenting the Iron Triangle

This document illustrates a couple techniques for documenting the iron triangle constraints.

The iron triangle is often used as a metaphor for the Project Management's triple constraints: Schedule, Functionality, and Resources. The fundamental planning principle is the triangle must remain in balance. One way to put the principle in words is:

> *In a given amount of time, with a given team, you can only*
> *produce a set amount of functionality.*

Pre Fixe Menu Metaphor

This metaphor is based on restaurants that offer Pre Fixe menus (i.e. For $25 you get your choice of one appetizer, one entrée, and one desert). The columns communicate increasing degrees of freedom.

	Fix	Aim	Adjust
Schedule	Must be ready for Feb's Trade Show		
Resources			10 Engineers Can add up to 5 contractors
Functionality		Complete infrastructure layer Sufficient business layer to: • Exercise the infrastructure • Be included as an alpha release to a "new customer" • Dumb UI for Expert User (eventual goal is a smart UI)	

You can use different labels such as "Mandatory," "Optimize," and "Negotiable." The point is to use terms that makes sense for your organization.

Target Zone Metaphor

Another approach is using the target zone. It communicates more degrees of freedom. The key thing to remember when using the target zone is the columns do not reflect different scenarios (i.e. worst case, expected case, and best case). The target zone communicates where tradeoffs can be made and still meet the project objectives.

For example, an acceptable scenario could be delivering the target functionality in January by adding the 5 contractors, and delivering the target functionality.

	Priority	Accept	Target	Stretch
Schedule	1	March	February	January
Resources	3	10 Engineers Up to 5 contractors	10 engineers	Use only 8 engineers
Functionality	2	Complete infrastructure layer Sufficient business layer to: • Exercise the infrastructure • Be included as an alpha release to a "new customer" • Configured using note-pad (same as current product)	Complete infrastructure layer Sufficient business layer to: • Exercise the infrastructure • Be included as an alpha release to a "new customer" • Dumb UI for Expert User (eventual goal is a smart UI)	Complete infrastructure layer Sufficient business layer to: • Exercise the infrastructure • Be included as an beta release to a "new customer" • Smart UI for an intermediate user

You can substitute "Tolerate" for "Accept." It really doesn't change the meaning, but some business people prefer it that way.

The target zone concept also works great for your project's quality requirements which also often have conflicting goals (e.g. an embedded device requirements for battery life conflicts with the requirements for bright displays). In this case, the target zone communicates where trade offs can be made and still result in an acceptable product.