Abbott Marine Corp

Tech Doc Process

Volume 2

Redesign Requirements

Objective of This Document

The objective of this document is to serve as a “teaching tool” for describing the process and system design of the Technical Document process, and follows the guidlines outlined in the DesignFlow™ Data Collection Guide.

With this as the objective, the design in the document is incomplete. The scope of the document is limited to describing parts of the design to the extent the student will understand the concepts necessary for documenting an entire process and system design.

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Process Output/Objective

- Create and revise technical books on time
- Create and revise translated books concurrent with the English books

As-Is Process Characteristics

What's Good about the Current Process

WHAT'S GOOD IN THE CURRENT PROCESS	WHY	EXAMPLES
Known roles	Everyone knows what to do in the current process	
Writers don't do graphics	Writers are not trained to do graphics and that's the way it should be	Last release when Bill tried to use the graphics tools he was reprimanded by management
Some writers get good assignments	If you're a good writer in specific area, you get good assignments because the editors know you can be trusted	.
English books are done before the translated books	Translation must key off the completed English books	
Teamwork	There is some good teamwork that goes on through the process, especially when it gets near a deadline.	We've been having brown-bag lunch meetings once a week to bolster teamwork.

Lots of Effort to reuse exising graphics and text modules	We have an online database of the existing text and graphics, and it's a lot easier to revise something than to create it from scratch	The databases were just set up a few months ago, and a few of the writers have been trained to use them

Quality Measurements

QUALITY MEASUREMENTS	Currently Measured? Y/N	Should be Measured? Y/N	EXAMPLES
Cycle time for English books	N	Y	
Workload of different writers	N	Y	
Defects	N	Y	
Customer satisfaction (3)	Y	Y	Data captured today (survey) & feed back to writing and Engineering community

Current Behaviors Motivated

BEHAVIOR MOTIVATED BY THE CURRENT PROCESS	Desired? Y/N
Circumvent process	N
Meet schedule	Y
Program success	Y
Increased responsibilty	Y
Better communication	Y
Motivated to be reactive, not thoughtful	N
(Work) Overload causes desire to escape	N
(Focus on) End user satisfaction (2)	Y
Teamwork (4)	Y
Work together or fail	

Process Deficiencies

DEFICIENCY	WHY?	EXAMPLE	Root Cause Category
Insufficient management support	Managers don't understand how hard it really is to meet the schedules given the way we work	.	5
Lack of communication	Writers and graphics artists seldom know what's really expected when they get an assignment	.Last release when we did the Service Manual, it took an extra month to complete because it wasn't clear who was in charge and who else had to approve things.	8
Workload balancing	Some writers have much too much to do, while other writers have too little. The same goes for the graphics artists.	.	1
Takes too long to produce a book	The book development moves by fits and starts, not smoothly through the process	The Repair Manual two releases ago took over 9 months from start to finish	1
Wasted time	Spend too much time waiting for others to finish their work before getting to what you want	Graphics Artists	1
Can't see the work in progress	It's impossible to see where all the pieces of work are in the system,		6

	so it's also impossible to reassign work		
Lack of planning	The assignments are not well planned out in advance, so bottlenecks always occur	.We can't find who has the master plan, or who has the plan for any individual book	7
Lack of prioritization	People work on things in any order they want, so it's tough to get important things through the process quickly		3

Wait Causes

WAIT CAUSES	WHY	EXAMPLES	Root Cause Category
Artwork back from the graphics artists	The graphics artist seem to have their own schedule which doesn't always mesh with the schedule the writer is working under		1
Large books	When large books are assigned to a writer, it takes a long time for that writer to finish all of it. This is a bottleneck problem	Harry is always a bottleneck because he always gets assigned the tough books	2
Research	Researching what needs to be done takes a long time. We never know what to search for, and we get little direction and advice from the people who make the assignments.		8
Lack of process knowledge	When you finish a piece of work, it's not always clear who to send it to next.		9
Unknown due dates	Assigned work doesn't always have a due date, so we don't know when it needs to be finished		10
Late specification of target languages for translation	No one thinks to do this until the last minute	For the last release, we didn't know what languages were defined for the User manuals.	4

Rework Causes

REWORK CAUSES	WHY	EXAMPLES	Root Cause Category
Lack of communication in graphics	The Technical Writer does not clearly say what he wants for the graphics		8
Lack of communication in books	The person making the book assignment does not clearly say what he wants to be created	Norm and Lisa always give vague assignments, and we have to chase them down to find out exactly what they wanted.	8
Lack of communication in translation	The translation coordinator does not clearly say what he wants to be done		8
Schedules (5)	Some people hurry to meet the date, but then are required to redo the work because it's incomplete or poorly done		10
Spelling and Stylistic check failures	The book does not pass the automated spelling and/or stylistic checker		5

More Time Should Be Taken For These Acitivities

ACTIVITIES TO WHICH WE SHOULD DEVOTE MORE TIME, ATTENTION, RESOURCE, ETC	WHY	EXAMPLES	Root Cause Category
Doing the research for the book	If the research is done poorly, everything else from that point on will be done poorly		2
Writing the Text	Once the writer does everything else he's supposed to do during the day, there's no time left to write text -- but that's supposed to be the main job		3
Planning (4)	The work is seldom planned correctly and we spend a lot of time at the end of a cycle fire-fighting and hand-holding		10
Doing the Graphics	The Technical Writer always wants his graphics done immediately (if not sooner)		3
Translation	Translation is always squeezed in the schedule and sometimes the work is shoddy		10

Less Time Should Be Taken For These Activities

ACTIVITIES WHERE WE SHOULD SPEND LESS TIME	WHY	EXAMPLES	Root Cause Category
Figuring out which graphics artist can do the work	We can't tell which graphics artist is overloaded and which is available for more work	.	7
Nothing	Everything is OK the way it is	.	0
Figuring out which writer is available for a new assignment	We can't tell which writer is available, from those qualified to do the work	.	7
Lining up new translators	It takes from 3-5 weeks to line up a new subcontract translator	.	10
Figuring out which languages to translate into	This is always done at the last minute, and we never have the criteria -- it takes about a week to decide	.	4
Editing after the writer completes the book	There shouldn't be any editing to be done after the writer finishes writing -- except for the occassional error (1 in a 100)		2
Reassigning work when someone is not getting it done (vacation, etc.)	There is no visibility across the system into the Work in Progress (WIP)		6

Root Cause Categories

1	**Workload unbalanced**
2	**Work assigned in pieces that are too large**
3	**Work is not prioritized**
4	**Translation started too late**
5	**Management support**
6	**Lack of visilibility into WIP**
7	**Lack of visibility into individual's workloads**
8	**Communication**
9	**Process definition**
10	**Lack of scheduling rigor**

New Process Requirements and Characteristics

1	**Workload balancing should be a byproduct of using the process correctly**
2	Work should be assigned in smaller pieces (not entire books)
3	All work should show a priority
4	All work should show a due date
5	Translation should begin as early as possible
6	The system should easily be able to show the Work in Progress across the system
7	Formal communication should occur whenever work is handed off from one person to another
8	The process should be rigorously defined and people should be trained in using it
9	It should be easier to do research
10	All scheduling should be done through the system
11	It should be eary to call up an individual's workload online
12	It should be easy to call up a list of qualified people to do a piece of work
13	Managers should have a view of the work that's really going on in the system

Critical Success Factors

ADEQUATE RESOURCES
- Provide adquate resources (3)
- Must make management aware of the impacts of their decisions (e.g., failure to provide the required resource)
- Provide human resources to keep on schedule. Need to have enough people to work the volume of the process.

OWNERSHIP / SUPPORT / BUY-IN / PROCESS ADHERENCE
- The process must have clear ownership by someone responsible for its outcome.
- Total management support
- Must achieve CS commitment/buy-in to support changes
- Management must be tolerant of failure
- Management commitment for success -- provide resources for each phase
- to the process. Beware of the tempation to bypass the process when there is a critical situation.
- Implementation plan must incorporate all stakeholders.

SIMPLICITY / EASE-OF-USE
- Make it easy to use
- User friendly: You don't need a PhD to execute the process.

CLEAR UP-FRONT SCHEDULING
- Define schedule document
- Clear agreement on all schedules
- All schedules clearly visible to all

STATUS TRACKING AND REPORTING

- Define and work a communication note log, to handle communications during hand-offs
- Provide daily status on issues, problems, etc.; provide status updates directly to the originator/requester.

PLANNING

- Minimize priority changes
- Time management -- don't try to do everything at once, phase things in
- Must assess system impacts of changes before we make the changes
- Well documented criteria for moving to the next process phase (entry/exit criteria)
- Planning (2)
- Work to a detailed work plan
- Planning -- must outline requirements, must cover all the bases (all affected areas)

PROCESS DEFINITION

- Process must be defined and communicated
- Allow for individual customization (by the users) -- cannot be ironclad.
- End user training must follow each major change
- Include links to other key processes

COMMUNICATION

- All results of this process definition effort (e.g., as-is documentation, to-be documentation) must be made widely available to all RAC people; the process must be communicated fully; the documentation must be in a place where people can access it easily.
- Open, Honest communications. Tell the truth, not what you think the other party (user, CS, management) wants to hear.
- Managing expectations: Promise what can be delivered, not more or less.
- Give users access to up-to-date tool functional information (e.g., how-to's, tips, tricks, techniques, etc.) -- the process needs to communicate such information

MEASUREMENTS

- Issue time limits for each piece of work. Keep the process moving. Don't let requests get stuck in the process (a major source of user frustration). Track and report exceptions.

TRAINING

- Knowledge about the products.
- Knowledge about the process

PROCESS IMPROVEMENT

- Multi-directional information flow -- Error/problem occurrences in the process must trigger us to make improvements to prevent future recurrence.