

Maintenance Group Structure and Workflow Recommendations

Submitted by: Project Management Office

The following proposal describes a method for restructuring the Tactical Project/Maintenance Group. This proposal is the result of ongoing discussions with various members of the team on how to better handle the many requests for bug fixes and small enhancement projects that currently flow through the maintenance department.

Current State:

Here is a snapshot of the current state of the maintenance group. As of today, the maintenance group consists of:

- ✓ Larry - Group coordinator/developer
- ✓ Mick - Developer
- ✓ Nancy - Developer
- ✓ Meg - Freelance developer
- ✓ Kenneth- HTML developer

Larry fields up to 100 e-mails a day and rarely has the opportunity to work on bugs or enhancement projects. He does analyze the requests that come into the group and makes recommendations to the other developers. He is in effect wearing 3 hats: project manager, tech lead and developer.

The remaining 3 developers (Mick, Nancy, Meg) are responsible for fixing all bugs as well as completing the enhancement projects that are assigned to the group. Currently there are approximately 12 enhancement or tactical projects in the Maintenance queue and approximately 17 bugs in the bug database. Bugs can take anywhere from an hour to a day or more to fix.

Kenneth can have up to 4 separate HTML projects in his queue at any given time.

The current project total for the Maintenance group is 33 projects, including HTML, divided among 4 people. Here are a few points regarding this workload that this proposal will be addressing:

1. The bulk of these projects do not flow into the group in a coherent manner.
2. Most of these projects, by their very nature, are expected to be turned around as quickly as possible.
3. The members of the maintenance team have no shield or layer of insulation from the project/bug sponsors. They are besieged constantly with e-mail, phone, and personal visits from the people who send in the requests.
4. There is rarely any documentation accompanying bugs or tactical projects.

The current state of the maintenance group reflects the state of the Production department as it existed one year ago. There is not a standardized process, there are no standardized methods of communication, there is not a project management tool being used to track or manage the developers or department project portfolio, and work flows into the department in variety of ad hoc ways.

Proposed Structure:

The first change that should occur to improve the Tactical/Maintenance group's structure is installing a full-time project manager and tech lead. As we move into the next year, the number of small projects and bug fixes will increase. The current lack of management within the group, of a dedicated tech lead, and of process in this department will aggravate the already tenuous condition of the group. The proposed structure would be as follows.

Project Manager (TBH)

- This person's role would be to provide the necessary management of all projects flowing into the group.
- A process (described in the Workflow section below) would be in place that would enable project sponsors to send projects in an organized way to the group.
- The project manager would review the project requests and if necessary work with the project sponsor to glean more information in order to create a project scope document or spec.
- The project manager would meet with the maintenance tech lead on a regular basis to review the incoming projects. The tech lead would provide the project manager with feedback on the projects in the queue, which would enable the project manager to schedule and prioritize the projects.
- The project manager would write specs when necessary as well as create and maintain project plans in MS Project for individual projects as well as the maintenance group project portfolio.
- The project manager would work with the tech lead and developers on tracking bugs that are reported through the Ticketing system.
- Most important, the project manager would provide a focused, consistent point of contact for project sponsors. The project manager would be responsible for managing the project sponsors expectations and would provide the developers with a shield from disruptive, impromptu conversations with anxious project sponsors.
- The project manager would also work with the Production department director on prioritizing the maintenance group portfolio as well as provide feedback on developer performance.

Obviously this is not going to be an easy job. The person in this role would be one of the busiest people in the Production department and would be dealing with many people on a daily basis. However, this role is crucial to the success and maturity of the group. Without a person in this role who is equipped with the support, process, and tools to manage the many projects flowing through the group, the success rate of projects entering the group will plummet and project sponsors will find other methods of getting their enhancement projects done—usually by going directly to a developer on the sly.

Tech Lead (TBH)

Once again, not a new idea but, like the project management role, an extremely important spot in the group. The tech lead role should be a permanent position and not be confused with the Production developer, who will be rotating through the group. The tech lead position will also offer a natural career path for junior members of the maintenance group. In the past, the person who was in this role also had to manage the group and the flow of work through the group. What happens is that the person in this role ends up answering e-mail and speaking to project sponsors more than working on the projects, and frustration ensues. The previous manager is the best example of this experience.

The tech lead role would include:

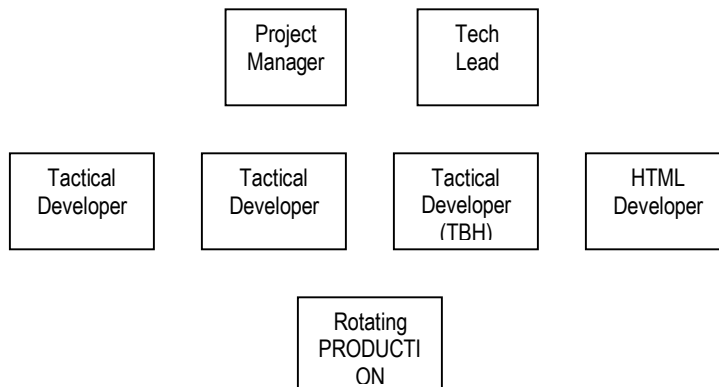
- Reviewing and analyzing all submitted projects to the group
- Working with the project manager to prioritize and schedule the projects based on their degree of difficulty and estimated effort involved
- Working on projects
- Helping other developers when necessary

As the Web Production Director has pointed out this will not be an easy position to fill. The candidate will need to be familiar with not only our application server environment but our system as well, and will need to have or develop some management skills. The easiest way to fill this slot is to look internally and then hire a new person in to fill the vacancy that is created. Hiring someone into this position from the outside would mean a long training cycle and we don't really have much time.

Other Roles

- Lead developer (1): This role may or may not have to be created; however, it may help with the structure of the group, provide another promotion option, and acknowledge the current role Mick is playing. Mick is the de facto bug person in the group. He currently analyzes the bugs and, working with Larry, assigns them to the other developers. When the system is installed in the group Mick will be the custodian of the system and will work closely with the project manager and tech lead on tracking bugs.
- Developer (2, 1 TBH): The developers role would remain unchanged. With the addition of project management and a tech lead, the developers will have a layer of support they currently do not have and, hopefully will find working in the group more satisfying. The group could use another head count in this role. As new developers are hired into the Production department, the plan is for them to begin in the maintenance group so this headcount may be filled as new people are hired.
- Rotating production resource (1): The current proposal is for the rotating production resource to only spend 1 week in the maintenance group. This is not enough time for the developer to acclimate, make any kind of significant contribution, or learn anything of value regarding peer's code. The rotating developer should spend at least 2 weeks in the group in order to make this program work. The rotating developer would possibly be only dedicating half of their time to the group initially anyway, as they would address bugs and questions pertaining to the project they just finished.
- HTML developer (1): An important role in the group and one that would benefit greatly from the installation of a project manager. Currently Kenneth receives projects in an even more ad hoc way than the other members of the group. Project managers, developers, designers, creative services, and editorial producers all submit jobs to Kenneth using e-mail or 'dropping by' his desk. The method for prioritizing his work is not formally established as yet.

The revised structure of the Maintenance/Tactical Projects Group would look like this:



Workflow / Process / Tools

Current Process:

Besides proper staffing, one of the most beneficial improvements that can be made to the Maintenance group is the introduction of a standardized, mandated process as well as the use of software tools to help manage the work flowing through the group. Currently the most popular methods for submitting projects to this group:

- *Submit the request to the Design Department and hope for the best.* This is the favored method of the editorial staff to obtain design changes on their sites. This method will usually get the work into the design department's queue or at least onto the design assistant's calendar, but there is no mechanism to get the revised design implemented in the templates (if this step is necessary). What generally happens is that the design work gets finished and languishes for a few days in the design department until the project sponsor contacts the design manager who in turn contacts a project manager or goes directly to the maintenance group to get the new design implemented.
- *The project sponsor sends an e-mail to Maintenance and hopes for the best.* This method will at least get the project on the maintenance queue, however there is no documentation and rarely a meeting to discuss the actual scope of the work. The onus is put on Larry to contact the project sponsor for more details.
- *The face-to-face submission.* Occasionally a project sponsor will "drop by" the maintenance group, speak directly to Larry, Mick or Kenneth, and describe the work they need completed. This method may or may not get the project into the maintenance queue depending on the forcefulness, tact, popularity, and familiarity of the project sponsor and will generally annoy or test the patience of the maintenance resource receiving the request. Once again, in these cases there is no documentation about the work that has to be done.
- *Submit the project to a project manager.* Project managers receive many small maintenance projects on a weekly basis. A request is usually made for a creative brief or at least a scope document, however, the odds of this document being created or reaching the maintenance group are about 1 in 4. What usually happens is that the project manager will write an e-mail describing the project to maintenance and cc: Larry, then follow up with a visit to Larry to discuss the project. The project manager then attempts to keep the small project on their own radar screen long enough for it to be completed. What generally happens is the project is forgotten by the project manager and not until the project sponsor e-mails, calls or "drops by" is the project status checked. Once again, no documentation or timeline is created and maintained.

The lack of process, introduction of chaos and risk are apparent in the submission methods described above. While these methods may work for some of the projects submitted, the percentage of successful tactical projects could be higher and the development time for these projects could be reduced.

The Introduction of Process

One of the most appealing aspects of this industry is the informal and loose approach to working and getting work done. The imposition of too much process or too many rules results in workers feeling constrained and possibly stymied creatively. The sense of community and spontaneity is

threatened. These are valid and appropriate reactions, and the challenge is how to introduce process and work methods without the threat of constraint. In the case of larger development projects, the need for process and business rules is obvious; these projects take more resources and more time to develop. The idea stage of large initiatives is longer and incorporates some thought to ROI.

However, the bulk of the work the editorial group creates is on the smaller end of the scale and usually is an enhancement of something that already exists. These types of projects may be harder to put a price tag on and may not necessarily require the strict ROI treatment larger initiatives are subject to. These projects also provide the editorial group the ability and opportunity to exercise their creativity as they continually improve their channels. The biggest fear communicated to the project management group from editorial after the introduction of the creative brief was that the freedom to make small-scale enhancements to their various channels would be removed.

The introduction of process into the maintenance group has to be in a non-threatening way that clearly illustrates its benefits to the smaller projects and shows that instead of curtailing creativity, it actually enhances it if buy-in from the editorial group is expected.

Turning the issue around and looking at it from the developer's point of view, the need for process should be apparent. The maintenance group could be described as frustrated with the current situation and badly wanting process and management while at the same time dedicated to the project sponsors and the work submitted to their group. The members of the group take on the work and, similar to the project sponsors submitting the work, hope for the best.

Proposed Process:

With the introduction of a project manager into the maintenance/tactical group, project sponsors will have a dedicated single point of contact with which to work to get their projects initiated. This step alone will be a huge win for people on both sides of a project. In addition to assigning a person to receive project submissions, there needs to be a formal way of submitting the projects. Here is where the risk of alienating some editorial people comes in, however, this is also where the initial breakdown currently occurs. A form similar to the creative brief has to be used as part of the submission process. The use of a form will provide the maintenance group with some documentation for each project. The project management for the maintenance group would use the documentation to analyze the project and then call a meeting (if necessary) with the sponsor to discuss the project. Because the project manager would be at risk of receiving an overwhelming amount of submissions on any given day, the submission process would provide for her to respond to all submissions by e-mail or phone within days. This would give the projects time to queue up or at least be analyzed in an orderly fashion. The introduction of a coherent method of submitting projects to the maintenance group would be extremely beneficial.

Note: Currently tactical projects are being prioritized at the priorities meeting, and this practice should continue. The introduction of a coherent submission method should help the project manager create a portfolio that can be handed off to senior management in order to be prioritized at the meeting.

However the onus of establishing the usefulness/feasibility/business worth of the projects submitted should not fall to the project manager but should occur at the priorities meeting.

It is crucial that this distinction is made in order to maintain the trust and goodwill of the project sponsors and avoid the impression that the maintenance group is a gateway to be passed before the project is completed.

The workflow for small tactical projects would be as follows:

1. Project sponsors would use a form, either online or printed, to describe the proposed project. The form elements are still TBD. The form would be attached to an e-mail or submitted through the knowledge management intranet.
2. All submitted projects would be responded to within two days to clarify the project details, set up a meeting to do so, or let the sponsor know that the project has been added to the portfolio for priority or queued for development depending on the development needs (some projects may not need to go to the priorities meeting and could be completed quickly and easily; rules for distinguishing projects need to be established).
3. The project manager meets twice or three times weekly with the tech lead to discuss the submitted projects. At these meetings the development effort necessary for each project is established. The projects are then added to the priorities portfolio or the development queue. The project manager and tech lead would assign projects ready for development to resources in the group.
4. The project manager would create a timeline/project plan in MS Project for all projects assigned to developers. Because of the fast nature of these projects, there may not be a need for a project plan for all projects to be created but instead a single master project plan that tracks all projects. This is still TBD.
5. Once a project was assigned to a developer, the project manager would work with the tech lead and the assigned developer to establish a ballpark delivery date. The project manager would communicate the date to the project sponsor.
6. This process would apply to HTML projects as well. A separate master project plan could be created for the HTML developer.
7. The project manager would meet weekly with the Creative Director to coordinate design enhancement projects that require template modifications.

Environment

In order for this process to succeed it has to be supported first from upper and middle management and then at the editorial and developer level. The changes described above should be documented and disseminated to all project sponsors and editorial staff. The process should be mandated by senior management to the editorial staff and training should be provided by the project manager of the maintenance group.

Establishing this process will be a welcome change to how these types of projects are currently handled, and buy-in from the editorial staff should not be an issue.

Necessary environmental rollout elements would be the following:

- The enhancement project needs to be defined. We currently have a definition of an enhancement project on the knowledge management intranet, but this definition was created by the project management group. Tactical / enhancement projects should be defined by the Web production director and Larry. Once this definition is established it can be used by project managers to determine if a proposed development project is really a tactical project and vice-versa. The definition would also be used in the priorities meeting to traffic projects correctly.
- When the final process is worked out it has to be documented and published either on the knowledge management intranet or in handbook form or both. Once the process is established and documented individual meetings with each channel should be conducted wherein the new process is explained, the contact individuals are introduced (project manager and tech lead), and questions can be answered.

- One of the most common problems brought to the maintenance group by editorial is not one of functionality but of knowledge. Both veteran and new editorial staff members regularly report their content publishing UIs as being broken or not working when in fact the problem is not with the content publishing UIs but with the user not knowing how to use the them.

The editorial staff is not trained properly on how to use the content publishing UIs or what exactly the UIs do. A regular training program for editorial needs to be established for all channels and all editorial staff, especially new staff members.

This training should include a manual on the basic content publishing UI functions that are common to all channels. Because of the differences in content publishing UIs from channel to channel, the channel producer or director should be the most adept person on the team in regards to using the content publishing UIs and responsible for training junior staff members.

Training should not fall to the maintenance group. These types of requests are time consuming and distracting.

Tools

The tools that need to be installed in the maintenance group to implement the process would be MS Project 2000 with the client-server project portfolio application and the ticketing system. Matt is currently installing an evaluation of the Project portfolio tracking application on one of the NT servers for the project management group to begin testing. Once the licenses for this product are secured it can be rolled out to the maintenance group. The ticketing system is currently being used by operations. This system would be used by the maintenance team to track bugs and communicate with the bug sponsors. If this system seems too robust for the time being then MS Project could possibly be used or a simpler freeware ticketing system. Either way, the bugs need to be documented and tracked to facilitate communication with the sponsors as well as for recording recurring problems.

Conclusion

The challenges facing the maintenance department are well known and the suggestions for change in this proposal are not new, however, the time to initiate changes in this group is now. After the re-architecture and into the holiday season this group is going to be inundated with work. A better system to handle the load needs to be implemented, and we need to find individuals to fill the management positions currently open/missing in the group.

In order for any changes to the group to be successful, support and cooperation from management and senior editorial staff need to be established. Also better training of the editorial staff needs to be initiated. Basic HTML skills training as well as thorough content publishing UI training needs to be conducted regularly. Currently Site XYZ is a Web site, not a magazine, and the basic skill set of a Web site employee should include knowing at least what HTML is and how to use the house tool, which happens to exist online.

The role of the maintenance group is going to become more and more crucial to the company as large-scale development projects wind down and smaller enhancement projects become the norm. The production department has built this site and the content publishing UIs that program it. We should make supporting it a fluid, easy process for all concerned.