The Technical Programmer Manager
The Best of Both Worlds
Dave Polus, COMSYS Clinical, Portage, MI

ABSTRACT
A Technical Programmer Manager (TPM) is a position that falls between Project Management and Senior Statistical Programming. TPMs spend the majority of their time on production programming, but have a portion of their time allocated to provide line management for a number of team members. The typical TPM is patient, and enjoys mentoring newer team members and directing highly functional teams.

INTRODUCTION
The paper is written from the perspective of a consulting company working on clinical projects for pharmaceutical and biotech clients. Most of the ideas and concepts here are also applicable to sponsor companies, or other industries which use SAS programmers.

What is a Technical Programmer Manager?
A Technical Programmer Manager (TPM) wears several hats each day including those of a senior statistical programmer, a project manager, an administrator and a teacher. In some companies they are known as Technical Leads or Technical Managers. TPMs generally have more industry experience than the rest of the team they direct. Ideally, they will have worked on several regulatory filings, and enjoy mentoring other team members.

The use of Technical Programmer Managers on larger teams
Employing TPMs on larger teams can reap several benefits. These technical managers may still spend the majority of their time writing code. Part of their role also requires them to mentor other consultants and compile status reports for the client and management. They are a focal point for both team members and management, as they have their “finger on the pulse” of a project.

TPMs can serve as effective sounding boards for other team members. Consultants should be encouraged to talk through issues that they want to raise to the client with the TPM to:

- ensure that there is not an obvious solution that can be implemented without client intervention
- make sure that the issue is presented clearly, consistently and understandably

It is important to set parameters for the consultant regarding communication that should go directly from consultant to client vs. that which should go through the TPM. This helps the consultant to understand what to do when...and it presents a consistent process to the client.

Discussion topics considered for this “direct” vs. “through the TPM” format can include everything from programming specifications to requesting time off. The need to structure this communication will, of course, depend on client expectations and team dynamics among other things.

Building the perfect beast: the ideal Technical Programmer Manager
Many Senior Programmer/Analysts are content to code away as part of a team or as an island. Others have a strong desire to contribute even more by leading a team. Let’s refer to these individuals as Super Senior Programmers, because they create a win-win situation for the client and SAS programmers working with the TPM. The TPM can help save the client’s valuable time by filtering questions, and addressing what can be resolved without client intervention. The client programming is allowed to focus on internal interactions with project team.
Other characteristics of a successful TPM include relevant industry experience, the ability to multitask, patience, a Team-first attitude and excellent problem solving skills. Notice the blend of strong technical AND “soft” skills; the latter is critical in differentiating a TPM from a contributor.

**What is the proper ratio between programming and management duties?**

The short answer to this question is “it depends” on several factors:

- the number of direct reports
- the experience level of these staff
- the number of concurrent studies/projects involved
- client expectations

Typically, the time spent on programming is between 75-85%. There will be times that this number will drop substantially, especially around study startup, and any time a team member is added.

**What does a typical week look like in the life of a TPM?**

As an experienced team member, the TPM can be counted on to do a fair amount of forward planning from week to week. By knowing the number of data sets and TLGs and accompanying deadlines, the TPM can work closely with the client lead to determine a reasonable amount of deliverables to be programmed in a given week, and can make the assignments accordingly.

Depending on their experience level, a TPM may also help oversee project, timelines, manage deliverables, help with closeout activities (QA, archiving). The Client may also delegate other responsibilities to the TPM, such as updating CRT specifications.

Throughout the week, the TPM will be fielding questions from within the team. For example, when a complicated shell is given, the TPM can help dissect it and guide a junior programmer in developing the code. The TPM can also help the junior programmer come up with questions or set up a meeting with the client as needed.

At the conclusion of the week, the TPM is the perfect individual to recapping the team’s activities in a status report for the client and internal management. They provide value by summarizing information from several sources into a cohesive, meaningful format.

**How many team members can a TPM effectively manage?**

As with the ratio question, there are several aspects regarding the makeup of the team to consider. With a mature and experienced team, it is reasonable for a TPM to manage 12 programmers. If the team contains several newer members, including some junior programmers, the number would be best at six to eight.

If the programmers are split across several projects, especially projects without direct involvement by the TPM, there will be downward pressure on the number (or upward movement on the TPM’s blood pressure).

**Care and feeding of a Technical Programmer Manager**

A good TPM can make their job look easy, even during hectic times on the project. It’s important to publicly recognize their efforts and contributions to the success of a project.

It’s good to set up regular meetings between the TPM and the client lead to ensure expectations are being met on all sides.

In addition, the TPM should have regular meetings with their management to explore personal growth opportunities such as training and to relay any needs of the project team. The TPM is a spokesperson for the group, but it’s critical that their skills as an individual are honed.

**CONCLUSION**
The Technical Programmer Manager is a valuable member of any project team. Not only are they amongst the most experienced members, but they’re also able to shepherd and mentor others. The TPM is responsible for moving a project forward at all times. As a TPM is part Senior Programmer and part manager, they are truly the best of both worlds.

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CONTACT INFORMATION
Your comments and questions are valued and encouraged. Contact the author:

Dave Polus
Engagement Manager
COMSYS Clinical
5220 Lovers Lane Suite #200
Portage MI 49002
O: 269-553-5100
F: 269-553-5101
dpolus@comsys.com
www.comsys.com

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