TechExcel

DevPlan - Innovation & Planning

Evolving Project Management Tools

DevPlan is a new generation of project management software that builds upon the foundations of tools that came before it while providing innovative planning features for the times ahead.

Project Management

As the software teams of the world strive to provide more complex solutions, the role of the project manager has become critical in modern application lifecycle management. A single planning mistake can spell disaster for the entire project. Just as the role of the project manager has grown, the need for project management tools to change with the projects is more important than ever.

Project management software provides the tools that allow a manager to ensure that a proposed initiative completes within a defined timeframe at a managed cost. In order to facilitate this, projects are broken into different elements of work, forming a standard work breakdown structure. This structure is a hierarchical tree structure of deliverables and their associated activities that need to be performed. These activities begin at set time frames and extend over certain durations.

Project activities may also have dependencies within themselves, such that one activity can not start until another completes. To conceptualize this, a Gantt chart is used. The purpose of the Gantt chart is to show the timing of tasks or activities as they occur over time.
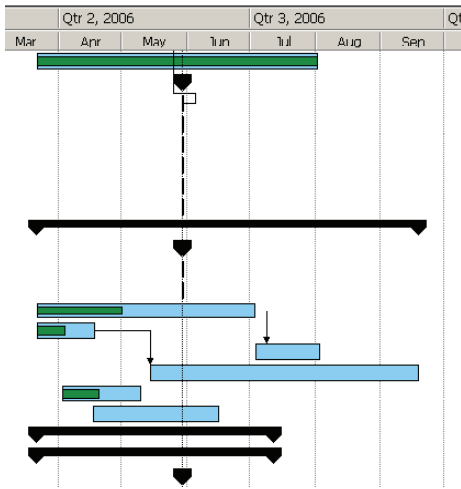
Figure 1 –Project management Gantt chart

While a Gantt chart is useful to visualize the timing and sequence of activities, it can also be useful to track the resources needed for each activity. Therefore, many project management tools include resource management components. These tools allow a project manager to assign resources to an area of work, and through the assignment of these resources, estimate the man-hours required for the completion of the area of work. A project management tool can compile this data and help a manager to see resource utilization.
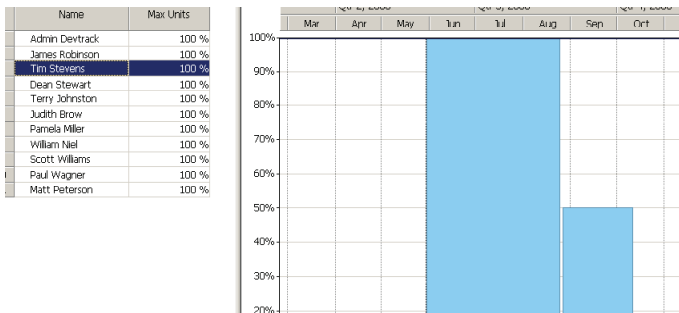

Figure 2 – Resource scheduling and allocation

Once the plan has been completed and approved, a baseline can be created. A baseline represents a manager's commitment to their organization about the deliverables, timing, resources, and duration of the project. Since the project plan is a living document, most software will allow for the creation of a baseline by saving a snapshot of the project at a given time. This baseline can then be used to measure the performance of the project over the course of its life.
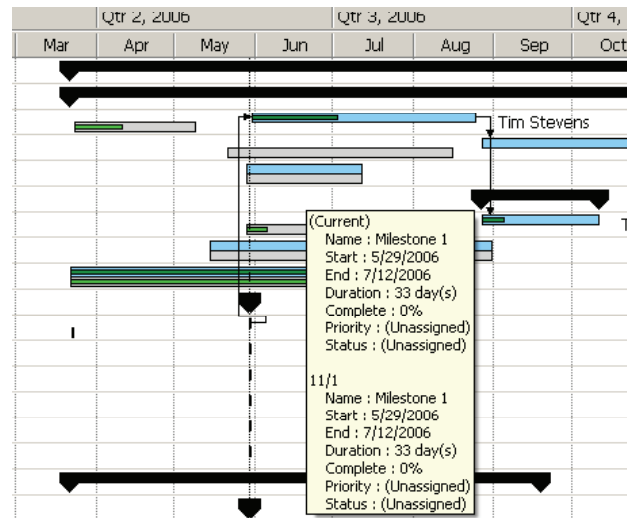

Figure 3 – Project management baseline comparison

These basic functions of project management have been well met by many tools from leading vendors. In a small, centralized environment, they are useful tools for tracking and delivering effective development projects. However, with the growth of outsourcing and the ever-increasing complexity of the activities within a project, these tracking tools have failed to scale with project size and importance. Specifically, these tools fail to address critical problems with modern development:

- Project oversight, management, and teams are often distributed. This requires that project-related information is also distributed. While online meetings, network-based file storage, and simple transmission such as email help to alleviate this problem, document control can become an unnecessary hindrance to productivity.
- The activities involved within a project have become larger, often spawning several micro-projects within themselves. These micro-projects can also have varying levels of complexity, allowing for several potential roadblocks within a project.
- Project planning becomes disconnected from the other elements of development such as issue tracking systems, version control systems, and QA test management systems. Each of these essential systems runs in segmented areas, often requiring complex programming and data transformations to share data or interoperate.
- Current software tries to be applicable to every type of project. This means that certain functionalities, related to development projects in particular, are scaled down in order to be applicable to a wider variety of uses.
- Development teams may be unaware of the initial intent of a feature, leading to wasted time and efforts under false assumptions.
- As projects evolve over time, they can lose their place in the

organization's overall outlook. The value of a project disintegrates because it is no longer able to demonstrate its value in the organization's vision and goals.

TechExcel DevPlan

TechExcel, a leading provider of defect tracking, is introducing its DevPlan product to address the needs of modern enterprises. DevPlan's innovative features make it an essential tool in today's application lifecycle. Beyond offering the standard series of features (such as Gantt charts, resource management, and baseline management), DevPlan is a solution to the common problems facing application lifecycle development today. DevPlan's approach is to break a project into two layers: planning and execution. This approach gives a new leverage to project planning: it allows a unified vision to drive the project forward. Planning takes place by breaking the project into areas of work, or sub-projects. Each sub-project can then be further broken into execution items by the creation of issues within the area of work. The end result is a more dynamic and multi-dimensional structure, layering a high-level plan atop low level execution items.

Since knowledge, resources, and events can be conceptualized at the sub-project level, a project manager does not have to get side-tracked with the details of execution and the project team is always focused on meaningful areas of work. DevPlan performs all the structuring and layer work and propagates the sub-project tree to DevTrack. This integration allows for flexible, scalable, and distributed project planning and management. With the growth of outsourcing, even small companies are realizing the economic benefits of distributed development teams. DevPlan was designed to account for this paradigm shift: it is designed around a web-service model, where multiple geographically-disperse teams can access a single dataset in real-time. This allows DevPlan to function in a number of IT environments while providing a high level of service, even to remote teams.

Document and Knowledge Management

DevPlan also helps distributed teams by using TechExcel's KnowledgeWise engine. This enables requirements, specifications, design documents, marketing brochures, and any other file to be related to a specific sub-project. These documents use intelligent algorithms to automatically detect differences between a server-stored document and a local copy. DevPlan's knowledge engine allows a manager to check-out a version of a document from the repository, make changes, and then check-in and

publish those changes.

Other team members can then see that their versions of the document are mismatched and automatically downloaded the latest revision. This allows for increased collaboration, but it also gives value to the project plan by supporting duration and resource calculations with documentary evidence. The effect of this is increased transparency of the project within the organization: a member of the executive steering committee or project oversight team can quickly and easily see why a planner has specified a certain duration or allocated a set of resources by checking the supporting knowledge for that sub-project.
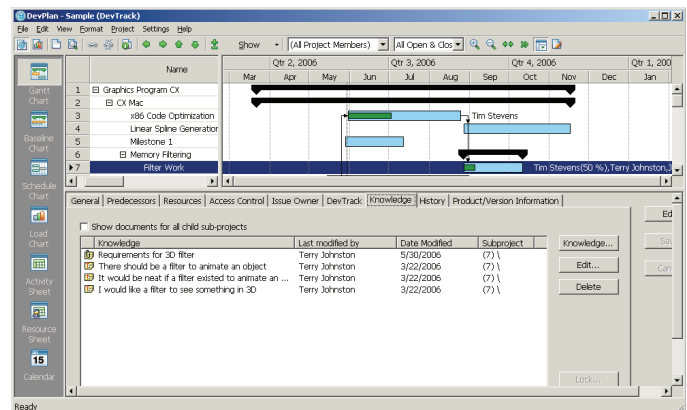

Figure 4 – DevPlan integration with KnowledgeWise

Event Scheduling

In addition to distributed document control, DevPlan also provides a robust calendaring system. Different tasks, or events, can be associated with a sub-project. This allows project managers to set up meetings and presentations while tracking these events within the context of the project plan. Integration with email tools gives the project manager a powerful scheduling system, inviting attendees based on their relationship to a sub-project, and minimizing unnecessary meetings and downtime.
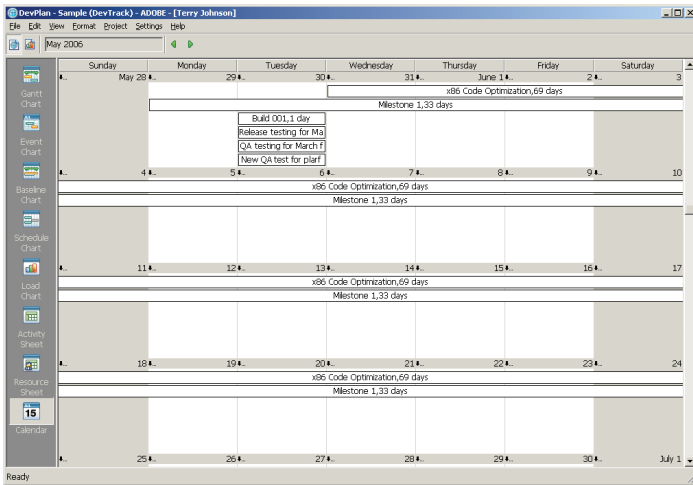
Figure 5 – DevTrack event calendar

DevTrack Integration

DevPlan sheds light into the ever-complex web of inter-project dependencies. Traditional project software tracks a task within a sub-project in the same view as the plan. This is sufficient for simple tasks but with software development each task can have its own lifecycle. DevPlan improves on other project tools by creating a separate layer of task management. Instead of having to conceptualize tasks at the planning level, a project manager can instead focus on the high-level activities while delegating the creation of the low-level tasks to specialists within that sub-project. DevPlan accomplishes this via seamless integration with TechExcel's DevTrack tool.
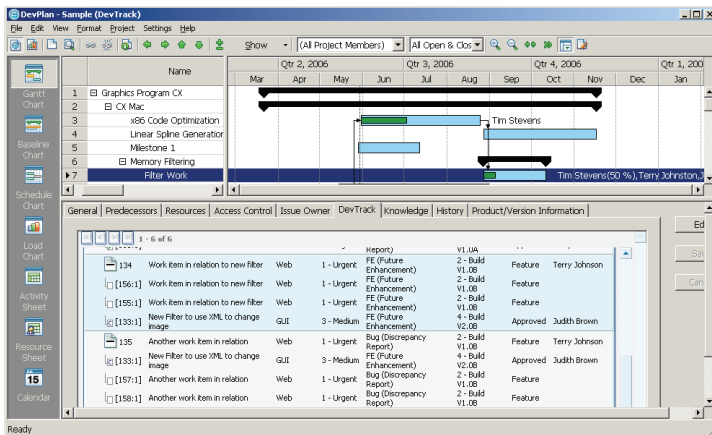

Figure 6 – DevPlan issue-tracking integration with DevTrack

The DevTrack integration allows for a greater granularity of control over the development lifecycle. The activities that a project manager creates are translated into the sub-projects, or areas of development, within a DevTrack system. The manager can then create DevTrack issues within the scope of a certain sub-project or allow the associate project resources to create their own issues. This gives a much clearer view of the sub-project: not only are the tasks visible, but each task has its own lifecycle complete with workflows, attribute tracking, ownership accountability, and definable escalation paths and notifications. This allows for management of the complex tasks that form the basis of a sub-project without the risk of that data diluting the project planning.

By separating the planning from the execution, DevPlan preserves the vision of the project manager while still calculating and granting visibility to individual task execution.
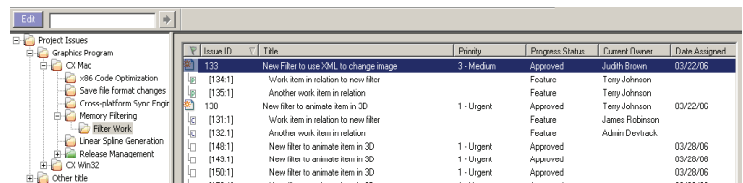

Figure 7 – DevTrack issue list

Industry-Standard Compliance

DevPlan's integrated approach to project management allows it to extend project management and process control to other areas of product development. Not only can it integrated with market-leading version control and build systems through DevTrack, it can also help to plan testing through TechExcel's DevTest. DevPlan also supports industry-standard data exchange through XML import and export utilities. This functionality allows for easy migration from other project planning tools. This also removes the need for complex interlinks and replication between different systems since XML is currently the industry standard for data exchange.

A project plan is a living entity and, as such, there are times when the scope or deliverables of a certain project must change in order to meet business rules. Without a tool like DevPlan, these items can fall off the radar. This causes a loss in the value of the project since the time and resources spent on those activities are harder to account for. Over time, this reduction of scale for a project can lead to a distorted view of its usefulness to a company. DevPlan solves this problem by assigning each sub-project a place within a company's product hierarchy.

DevTrack already allows for the building of a product, version, and build tree. DevPlan extends this concept by applying each sub-project to a particular product or version. Since planning and development are associated by this product and version system, deliverables and milestones are feature-driven. DevPlan allows for the re-assignment of certain features to a different version in order to meet certain milestones.

DevPlan Versatility

DevPlan is flexible enough to allow for milestones to be reconfigured in relation to the current development state of a feature. This flexibility lets managers steer a project more precisely and allocate development activities to the activities which will most visibly increase the value of the project. Since each sub-project has a defined home in a product or version, the work performed in relation to that sub-project, even if it is postponed or moved to another area, is not lost.

Finally, DevPlan contains a special view for reporting and business intelligence. A central reporting interface, coupled with point-and-click, customizable report options, allows project managers and oversight to see immediate data. These reports can be used to quickly and accurately assess the value of a sub-project in relation to the bigger picture. Coupled with DevTrack, KnowledgeWise, and other TechExcel products, DevPlan seeks to mitigate the risks of modern software development projects while providing project managers the ability to easily steer projects and align activities with business priorities.

While customer demands, changing business goals, and market forces continue to increase the complexity of software development, DevPlan adapts to meet these changing needs. Just as development projects evolve, so must the tools that steer development and growth. DevPlan is a new generation of project management software, building on the foundations of the tools that came before it, while providing innovative features for the times ahead.
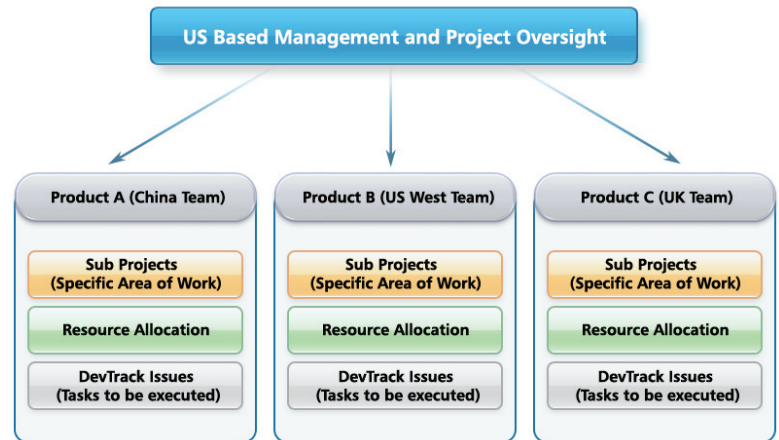

Figure 8 – DevSuite implementation with distributed components

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