

Micro Planner X-Pert

November 2007

Project Management?

Life is a series of projects - goals to achieve, work to complete, resources to allocate, and results to communicate. Where time is money, precise project management requires foresight, experience, and a regular supply of up-to-the-minute information.

To meet these demands, computer-based project management systems are being applied across all types of industries, to encompass many facets of executive planning, resource scheduling, and time management and cost control.

What Projects?

Most managers in any organisation become involved with projects from time to time. Projects can be defined as numbers of inter-dependent operations that end in one or more deadlines and may or may not utilise people, machines, materials, or money.

Whether or not these activities are called 'Projects' or are organised by people bearing the title 'Project Manager' does not alter the fact that Micro Planner X-Pert can help with their coordination and control.

Users of Micro Planner report a variety of applications, here are just a few.

- Design projects in various industries
- Research and development
- Construction projects
- Mechanical and electrical engineering
- Heavy engineering contracts
- Works scheduling for industries with one-off orders.
- Organisation of exhibitions or other "events"
- Product launches or marketing campaigns
- Company Audit
- Political campaigns
- Installation of plant or equipment
- Film or television production
- Commissioning of plant or equipment
- Data processing projects
- Office reorganization
- Plant breakdowns planned maintenance or retooling.
- Military exercises

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What Is Micro Planner X-Pert?

Micro Planner X-Pert is the most powerful project management application fully integrated for the application of Time and Resource Scheduling, Cost Control and Earned Value. It enables the user to take full advantage of the power of the very latest computer technology. It is designed to be used by newcomers but offers sophisticated facilities to delight even the most discerning project manager.

A prime objective in the design of the software is to provide a simple and efficient man-machine interface. We believe that you will find it the most responsive project management tool that you have ever used. It follows a logical methodology, is friendly and intelligent, knows its facts and is quick to appreciate any potential problems in your project.

Whatever your present planning tool -computer, pencil and paper or guesswork, X-Pert will enhance your planning capabilities and productivity. Control of even the smallest project can be dramatically improved - even the process of entering the model into the computer can help you to refine and understand your objectives. With X-Pert you can present even the most complex project in the form of a clear and concise visual model and then interpret that model to control resources, monitor progress, control costs, and analyse efficiency.

What Is It For?

Micro Planner X-Pert is designed with the important aspects of monitoring and control as major objectives. These can be summarised like this...

CONTROL OF PROJECTS: to constantly organise and monitor complex projects, producing schedules and reports that people understand.

CONTROL OF TIME: to figure out feasible deadlines and show how to meet them. To identify those operations which are critical.

CONTROL OF RESOURCES: to smooth out workloads for increased efficiency. To identify critical, insufficient, or excessive resources.

CONTROL OF COSTS: to calculate the costs of running the project. To identify how fixed costs or overheads increase if the project is delayed.

PROGRESS CONTROL: to track and record actual achievement of project operations and to highlight progress slippage and problem areas. To compare Actual Costs with

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Earned Values to control against budgets. To analyse the planning of corrective action.

SIMULATION: to explore possible alternatives in “What-if?” or “Where do we go from here?” situations.

Why Micro Planner X-Pert?

Planning is a vital part of project management, but it is important to understand where the planning process finishes, and the control or management process takes over.

The disciplines, which differentiate serious management from simple planning, are those concerned with:

- Setting Cost, Resource and Time baselines.
- Monitoring progress against those baselines.
- Taking remedial action and rescheduling.
- Reporting and communicating management intentions.

Micro Planner’s strengths in handling these disciplines is what sets X-Pert apart from ordinary planning packages.

General Benefits

- Better control of time and resources saves money and increases margins.
- Delivery dates or other deadlines can be reliably forecast and met.
- Increased communication from easy-to-read reports helps to avoid confusion.
- Confidence is enhanced as risks are reduced.
- Opportunities for greater involvement of the whole project team in the actual planning process.
- Excellent value for money: low cost for a complete system when compared with similar functionality elsewhere.
- Ability to manage in a multi-project environment (programme management).

Ease Of Use Without Compromise

Although it has arguably the most powerful and sophisticated analysis engine on the market, X-Pert is designed for ease of use - to be flexible and responsive to your requirements. After all, you need to be in control of your project right from the start - not wrestling with the software!

The X-Pert approach is to confront the complexities of project scheduling in order to focus on solutions. Rather than simplify the techniques it creates an intuitive graphical environment that provides a unique overview of your project data.

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X-Pert embodies a disciplined approach that enables you to use it as the cornerstone of your Project Management quality procedures. It does not duck out when the going gets tough. Beginners can use the software at a simple level - to “hit the ground running”. The more sophisticated features can remain out of sight to avoid confusion but as your knowledge of the package increases, you will not run out of power to tackle the most complex projects.

Graphical Visibility

X-Pert provides a unique “desktop” approach to the management of your projects. The desktop window is laid out with icons and “folders” providing mouse access to all the information in the project.

In addition to the first Subproject icon, Work Breakdown icon and five folders provided in a new project, you can create new subprojects, new folders and icons, name them to suit your needs, and even nest folders inside other folders. Naturally, since folders are used for filing information about your project, you can decide where you wish to store items - networks, calendars, resources, reports etc.

The Custom Menu folder provides a quick and easy method for selecting frequently used items, such as a weekly status report that you may have designed yourself. Items stored in this folder appear as Custom Menu items accessible from the View menu. X-Pert gives you a unique overview of your project, empowering you to experiment with alternative schedules and adapt your schedule to accommodate the most unexpected circumstances.

Multi Platform

Micro Planner X-Pert is available for computers running both Windows and MacOS, i-Pads, using the cloud environment – Guacamole.

Collaboration

X-Pert has features that make it ideal for collaboration on large multi-site or multi-departmental projects.

Self contained project models can be created at each site using the resources at those sites and subject to different project management teams if necessary. However, where those different disciplines interface with each other, X-Pert has a unique feature to link projects together from one project file to another. This linking can take place across local or wide area networks or even from mailed-in floppy disks.

Where there is a need to consolidate data from various disciplines then X-Pert is able to merge data from each site to form one large multi-project file where results from each section can then be viewed as a whole or rolled up into a single Work Break-down Structure.

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While it is desirable that all parties collaborating together should be using X-Pert, it is possible to consolidate projects with varying degrees of precision from other programs including Micro Planner Manager or Microsoft Project.

Exporting And Importing

In addition to its facilities to move information around from project to project, X-Pert also has Export and Import features which allow it to communicate with other software - typically databases or spreadsheets.

Using basic data files that can be almost universally read, X-Pert exports selected task or cost data with specific fields. Using similar file formats, X-Pert is also able to import new tasks or update existing tasks from other software.

It is therefore possible to create a scenario, for example, where project data may be updated to include actual cost information that has been generated by external financial software.

Multiple Projects

If your organisation needs to manage a number of projects simultaneously or if there is a need for collaboration between a number of groups working on the same project, you will find that X-Pert rises to the challenge:

Programme Management

When multiple schedules are running in parallel with each other, they can be entered as distinct network diagrams and segregated using X-Pert's labelling system. During analysis, the program is able to take the requirements of all schedules into account, with the facility to impose specific priorities for particular schedules or tasks.

X-Pert's ability to copy and paste sections of network from one place to another or to transfer whole subprojects from one project to another enables you to store libraries of standard plans or recycle previous plans.

The reporting facilities enable you to prepare reports for individual projects as well as the whole workload while integrated results for resource requirement or cash flow are also available.

Creating The Project

Logic Networks

Unlike many simple planning packages that rely on Gantt chart data entry, Micro Planner is designed to assemble projects as logic networks (sometimes referred to as PERT charts). This is a more professional approach that, as projects become more complex, provides greater discipline, and proves easier to understand and manipulate.

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Gantt charts are, of course, produced automatically as presentation reports and can be used to add progress or modify durations.

There are two different techniques for drawing logic networks, Precedence or Activity-on-Arrow.

X-Pert is one of the very few packages available that offers a choice of both techniques. It is the only package that can use both techniques within the same project.

Easy Drawing

X-Pert's unique network approach allows you to draw the network on screen more easily than using pencil and paper! Electronic drawing windows called Subprojects allow you to assemble networks of inter-linking operations that in turn can be linked to other subprojects. Networks produced on screen can be printed, retaining the layout in the same form as it was entered.

Logic networks provide a powerful overview of the challenges facing a project and X-Pert's clear view and responsive power allows project team members to work together at a computer screen to cooperate at the heart of the planning process.

Rapid Network Construction

A powerful facility allows you to save time by copying and pasting typical network sections from within the network or from library files. Whole subprojects can be merged from one data file to another allowing rapid construction of standard project elements and cooperation between management teams.

Open Access to All Information

In addition to the network diagrams, the program offers a variety of ways to enter or modify your project information ...Spreadsheet-style tables allow bulk data entry.

An outliner allows you to combine the construction of a Work Breakdown Structure (WBS) with task input.

Information can be modified from any view including networks, Gantt charts cost reports etc., choose whichever method is appropriate.

A Wealth of Features

As your knowledge of the software increases, X-Pert provides an abundance of options to fully define each activity and ensure the accuracy of your plan –these include an organisational structure of three separate labels with a variable hierarchy, descriptions, sort codes, comment fields, WBS and explanatory illustrations.

Durations can be expressed from weeks to minutes - even mixing scales in the same project.

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You can choose to run your project using a calendar or numeric dates, choosing either or both for your reports. Milestones, overlapping relationships, 'elastic' tasks, and hammocks - all these and more are standard.

Rapid Relocation

- X-Pert's design allows rapid access to any information on the project model:
- Find facilities help to locate a task by identifying part of its description or its code name.
- Rapid opening and closing of subproject windows Zoom out, locate by sight, and zoom in again.
- Multiple open windows.

All these methods enable you to move around your project model with a minimum of wasted time.

Time Analysing the Project

Critical Path Analysis establishes each task's start and finish dates, highlighting jobs that must not be delayed if the project is to finish on time. A host of facilities are available for controlling Time Analysis - including various types of imposed start and finish dates, dynamic linking from different project networks, and negative float where the projects overrun contract deadlines.

Getting It Right

Following Time Analysis, you may wish to edit your project model to correct mistakes or adjust sequences to meet imposed requirements. You can alter or update project information by opening tasks from within any report or chart. Alternatively, you may prefer to drag the bars on a Gantt chart view to directly alter an operation's duration (or add progress at a later stage).

Controlling paths, supercritical paths, and listings of all preceding or succeeding events can be isolated for review. Activities can be overlapped using Start-to-Start, Start-to-Finish, and/or Finish-to-Finish dependencies in Precedence diagrams (or ladders in Arrow diagrams). Multiple calendars can be specified from five day to seven day or 'weekend only' work weeks (or any working pattern you specify), shift work and planned overtime can be introduced, and so on, until the Time Analysis results reflect your project's exact requirements.

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Adding Resources and Costs

Time Analysis provides you with accurate time constraints for your project but frequently it is the availability of resources that will determine your completion dates. Resources can include anything required to complete your project (people, plant or materials) and the balancing of those resources that are under the project's control may be crucial to your plan.

No matter how complex your project becomes, adding resources and their costs couldn't be simpler: specify what resources can be used, how many there are and when they are available; apply cost rate changes to resources to build in real-time resource cost inflation.

Tasks can use resources partially over the task's duration, either at 'rate-per-day' or 'total workdays', or in quantity steps of 2 decimal places.

Each resource can work to its own calendar if required, four cost rates (idle time, normal hours, overtime, and overload) and availability profile with both normal and threshold levels.

X-Pert also allows the use of Pool (consumable) resources like bricks or other bulk materials.

Cash can be added as a resource when it covers costs that are independent of other resources.

Skill Sets

Individual resources with similar skills can be held in skill groups - each resource within a group can be allocated an efficiency percentage.

When you assign a group resource to a task, X-Pert locates the least used but most effective member of the group for the work.

Durations are normally based on each individual being 100% efficient if an individual is rated higher or lower, the duration is adjusted.

Resource Analysing the Project

Having allocated resources to your project, Resource Analysis shows you how long the project will take using the resources you have available (Resource Critical), or how many resources you will require to finish within the minimum time (Deadline Critical).

This powerful analysis process juggles the requirements for resources (maybe several per task), multiple calendars, varying priorities, group resources, splitting of tasks etc. - and it produces the results right down to the minute.

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Controlling Analysis

In addition to the above Resource Critical and Deadline Critical options, you can choose, Early or Late Aggregation (all activities starting on their earliest and latest dates respectively). With Deadline Critical Resource Smoothing, activities with float are delayed until they become critical, then resources are overloaded; Resource Critical smoothing does not overload resources until the project maximum delay (specified by you) is reached.

You can decide whether to allow Resource Analysis to split activities when there are not enough resources available, or to demand an immediate start irrespective of resource availability. Specialist activities may be used to fine tune resource usage - for example, Sponge Hammocks may soak up spare resources carrying out fallback tasks. Find out what your staffing levels should be next year, or whether you can realistically slot in that extra contract without jeopardising existing work. Whether you have to say, “YES” or “NO”, you can be confident of your future resource loading.

Visible Analysis Results

The revised timings that result from resource smoothing are placed in a specific time schedule that can be examined as a Gantt chart and compared directly with the original Time Analysis schedule.

Resource Histograms give a clear overview of leveling results – you can freeze the current histogram or have it updated with future leveling trials. Filtered network views represent another way to assess the full impact of resource smoothing. For example, you might display only those activities with a certain amount of free time or alternatively the most critical activities; such filtered displays reduce network clutter allowing you to focus on a particular project area and add refinements.

Having assessed your Resource Analysis results, “What-if...” simulations allow you to experiment to find the best solution (a balance of time constraints versus the associated cost and resource implications) - one that fits your company’s policies and is realistically achievable.

Project Costing

When all is said and done, a Project Manager’s prime objectives are to complete the project on time and within budget. To meet those objectives, X-Pert offers facilities to build up a cost plan that is linked directly to the time and resource plan.

In terms of cost too, X-Pert maintains an extensive range of facilities. Costing results flow from resource analysis and go on to add cost accruals, monthly budgets for the next six months, Earned Value Analysis, budget-vs-actual cost comparisons, global or

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activity level adjustments and most of the other features required by current cost management standards.

This means, for example, that inflation forecasts can be accounted for, as can fluctuations in charge out rates for hired equipment or personnel; it will also make allowances for the time lag between invoices being sent out and paid. In addition, resources may be switched off so that their costs are accumulated without the resources affecting the schedule. The program also has a unique facility to cost out resources that are NOT used.

X-Pert has several standard graphics, planning, and cost summaries. For example, a selection of cost reports provides cash flow forecasting, job costing, Earned Value Analysis, and wastage analysis (charting inefficiencies when resources are under-utilised or over-utilised). Cost/Time curves show when money is spent, and Pie Charts can show where it is spent.

Communicating The Plan

Effective presentation and communication are essential for effective project management. X-Pert has a selection of Standard Reports that can be edited to suit your presentation needs. These include Progress Report, Job Card, Milestone Report, and of course Gantt Reports (or bar charts). In addition to this suite of reports, X-Pert also provides a range of quick-view charts, allowing you to access project results more quickly - these include Gantt View, Linked Gantt Chart, Resource Histogram, and Network Diagram.

The reporting facility allows tasks for inclusion in any of these reports to be selected and sorted on almost any field. Further fine-tuning allows you to hand-prune and delete unwanted reports without going through the process of re-selecting.

Complex sorting and selection criteria can be saved as virtual macros for use in other reports or other projects. If none of the standard reports meet your exact requirements, you are free to design and save your own report layouts. Report Stationery allows you to create reusable report templates containing preferred fonts, logos, and legends - as well as resources and tasks. X-Pert gives you a blank drawing area to arrange headers, footers, labels, resources, and any data field - including static graphics or dynamic images that change with each record. The whole process is straightforward, just grab report components with the mouse and place them anywhere on the page. A ruler and guidelines help to precisely position elements. Moreover, reports can be saved in a Custom Report Menu for instant recall.

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Enhanced Reports

Reports may be annotated with pictures or text to provide clarification of particular project phases. In addition, reports and charts can be saved in picture format for use in tender documents or other documents - you can even produce composite reports by placing a Gantt chart, Resource Histogram or Pie Chart as an illustration into another report.

Immediate Access

All your reports which include standard reports, schedules, histograms, cost pies and cost curves can be reduced to icons with all their settings on the X-Pert desktop and stored in folders. These icons are virtual macros which allow X-Pert to redisplay the report without having to restructure the commands used to set them up in the first place.

This means that a series of reports is required, for example every time you update. Your project can be opened and printed quickly and easily.

Managing The Project

Planning your project is only the start of the job - X-Pert's real objective is Project Management, and this necessitates control of the project from start to finish! The processes of Time, Resource and Cost analyses provide Baseline Schedules and Cost Plans (Budgets) which can be agreed and archived within X-Pert's database to facilitate progress and performance measurement.

Three sets of start and finish dates are stored by the system: Early and Late Start/Finish dates and latest Resource Analysis results.

In addition, two archives are supplied - Master and Interim. The Master Archive contains the baseline plan for comparison during the project life cycle - it also creates the master budget for future actual-vs-budget cost comparisons. The Interim Archive allows you to experiment with alternative strategies for project completion; one alternative can be stored for comparison with another - ensuring the original baseline plan is secure in the Master Archive.

Progress Updates

Project control involves updating the schedule to record progress. This process is facilitated by X-Pert which has its own concept of "time now" which differentiates actual performance versus forecast performance.

As your project proceeds, X-Pert lets you track actual progress against your planned schedule. Job Cards or Short-Term Gantt Reports are useful feedback documents for the project team.

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Progress information is entered as actual start, percentage done, balance and actual finish. Actual resource usage can be recorded against each task and additional actual costs can also be entered -globally, or against each task if necessary.

Progress information can be entered via networks or reports like the one on this page or any task reports. There is also a spreadsheet-like table view that allows bulk input of progress or other change information. The import facility can also be used to bring progress information into a project file.

Any unscheduled future costs or resource variances can be added as you go.

X-Pert understands that work that has no progress information is delayed to the future. Once progress is recorded the implications of delays, resource shortages or cost overruns can be assessed.

Revised resource requirements can be assessed from histograms.

X-Pert displays your project costs as Cost Profiles, (or 'S' - Curves) which highlight performance against budget. These curves show the true earned value of work performed, actual cost to date and estimated cost to completion so that you can view your project's cost trends at a glance before you take corrective action.

Only with this data can managers react quickly to ensure that deadlines do not slip or that budgets are maintained. Micro Planner X-Pert allows you to input progress and assess project status quickly and easily to ensure your time is spent managing the project not the software!

Keeping On Track

Once the implications of progress (or lack of progress) are known, remedial action can be taken to replan those aspects of the schedule that need attention.

'What if' analyses can be carried out until the revised schedule and cost plan are acceptable. Revised schedules are then communicated to your project team to ensure that the revisions to plan are received and understood. Short Term Schedules that highlight both the revised plan and the schedule it supersedes are vital for this procedure.

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Press Reviews

About X-Pert for Windows

Since its launch, the Windows version of Micro Planner X-Pert has enjoyed increasing success. It has been well received by users of the classic DOS based Micro Planner Professional and has found favour with new users who appreciate the benefits of powerful project management software operated through a truly usable graphical interface.

They Like Its Features...

X-Pert has always been praised for its advanced features. Few packages can match its sophisticated resource management facilities, and this is what they say...

“In terms of providing the information you need to be confident of understanding the financial implications of differing courses of action, X-Pert is still hard to beat.”

Adrian Dooley of Project Manager Today

“Finding something truly different in the universe of project management software is like finding a new subatomic particle. After researching and evaluating numerous packages, I believe I have found the quark! Micro Planner X-Pert for Windows (MPXW) is a high-end package produced by Micro Planning International, originally in Bristol, UK. Now in Australia. The advanced package I reviewed delivers impressive capabilities in the total project management process -planning, modeling, scheduling, and tracking.”

W. Richard Mosig Jr. - Cost Engineering (USA), May 1996.

Project Management Services

Micro Planning International Pty is ready to provide training in the fundamentals of project management as well as the use of MPI's products. In addition, through a strong network of Associates, we are able to offer a service that is local to you thus reducing expenses and maximizing our time with you, our customer.

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Contact Information

If you would like further information on how we can support your needs, then do call

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