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ORGANISATIONAL PROJECT MANAGEMENT

The IT revolution of the last decade has failed to increase our managerial and administrative productivity.

This is the result of an investigation on the effects of computerisation in the office, conducted by an independent institute in the USA and sponsored by, among other firms, Kodak.

Honestly, I was not surprised when I read the result of this investigation. And I believe that I share with most of you that little gut feeling that despite all the computer grunt on our desktops we have missed the point somewhere along the line.

In our daily struggle with the limitations of time, resources and money the degree of our productivity and efficiency ultimately spells the difference between success and failure. Whichever solutions IT offers us, it has to improve our performance in the minefields of a daily changing project environment.

To make corporate IT a meaningful tool for us it has to serve our objectives.

The development of the so-called "Expert" or "Knowledge Based" systems is the first step into the right direction. These IT terms describe applications that have been developed by the experts of a particular profession, in our case professional project managers.

Programme Evaluation and Review Technique (PERT) and Critical Path Method (CPM) have since their first application at the US Polaris Missile Project in the late fifties matured to a significant range of computer based project management tools. Now let me examine our today's situation: Every project's essential feature is to bring about change. That is not new. What is new is the rapidity with which this change is brought about. Since all the three core aspects of project management, time, resources and money, are clearly limited we must bring this change about as effectively and efficiently as possible. The applied philosophy 'right first time' is essential for profitable performance. To achieve that, project management has to pro-actively interface with all other disciplines of corporate management. This situation is shown in graph 1. We must therefore expand the application of project management tools from the level of individual projects to an overall corporate level. On that expanded level project management is applied to control the plethora of corporate projects that occur simultaneously including those few large projects that transcend many departments. We call that Organisational Project Management™ (OPM).

The approach to implement Organisational Project Management may be a gradual one.



Chart 1 depicts a Project Management Effectiveness Curve. It summarises the different phases organisations can pass through as they become familiar with project management technology. Initially just producing formal Ganti Charts (Barcharts) is an improvement over no formal systems. The next move is to Critical Path Networks.

Major improvements in effectiveness start to become apparent only as progress tracking on individual projects is introduced. At this stage the adherence of the software system to appropriate Standards becomes important. The line between "reactors" and "managers" is where "Standard" CPM techniques are in use together with regular status reporting and the use of trend and progress (variance) reporting to determine what has gone wrong and to make adjustments to the future performance of the project.

Problems often relate to the lack of key resources and the inability to plan far enough in advance to account for the long lead times required to add key technical resources to a project team. Managers who apply resource planning and levelling can realistically assess their ability to meet project requirements far enough in advance to provide the required resources when needed. Rather than constantly fighting fires, resourcing combined with tracking allows the project manager to move from a reactionary to a proactive mode where resources are managed effectively to meet deadline.

In fact, managing limited resources usually requires a more global approach since most people are working on a number of projects as well as everyday overhead duties that vie for their time. The benefits of moving to the global approach of Organisational Project Management are significant.

Modern day matrix organisations do not usually have rational ways to deal with the plethora of projects undertaken and the limited resources available. Boards of Directors continue to commission more projects while resource pools remain fixed. The result is a sort of project Darwinism where projects with the most politics behind them survive and the rest fall along the way.

OPM forces priority setting throughout the organisation so even at the highest levels, the options are "Painfully Obvious" and priorities can be realistically decided according to strategic criteria. The hardware, software and training costs associated with implementing an Organisational Project Management™ system are inconsequential relative to the savings made from the efficient use of resources and tighter control over costs.

1) The essence of OPM is to push day-to-day management control down to the individual Project Managers but to report to senior management, in an effective way, summary information relating to the whole organisation and key details (variances) for each of the individual projects.

2) Each Project Manager must have schedule control over the work involved in completing their project.

3) In parallel with these requirements there is an additional need to provide departmental management capabilities so that the competing demands of several projects, calling on staff from within the one department can be adjudicated.

4) To be effective, the overall planning process must maintain data integrity up and down the system and needs to minimise the double entry of information. At the same time, simply consolidating data from lower levels in the planning system is not acceptable as any errors at the project level will be passed through to corporate reports. Senior management may also require changes in the current project plans before accepting the overall information.

5) The planning team as a whole needs to be capable of working for many different masters who will often have different objectives whilst maintaining common OPM standards and methods.

At the top level, the Master Schedule is a summary produced from within the Programme Element schedule utilising Hammocks, rather than a separate programme. The Programme Element Schedule, maintains its traditional role with each activity on the Element Schedule relating to a discrete section of a project and is used to map the interaction of schedule changes between different projects, affecting resources, deliverables, cash flows, etc. Chart 2 displays this situation.

At the project programme level a series of small to medium sized sub-projects exist (at least one per project). For the OPM structure to be effective all of these individual sub-project and project programmes need to be dynamically linked at key points. Then if the deliverable elements from one project change, e.g. a key resource will finish later than originally planned, the corresponding tasks are delayed within the other linked projects.

The third element in the matrix is to be able to merge all of the detailed requirements for resources from several different project programmes or subprojects into one 'Departmental control Programme' to ensure that the Department has the necessary resources to meet all of its obligations. If insufficient resources are available, revised schedule data needs to be passed back from the Departmental schedule to the individual project programmes and then up to the Programme Element schedule.

The Master Programme

The Master Programme is the start of the process. Once the Master Programme, with its Element Schedule, Milestone and WBS are complete the OPM framework is in place and key "interference points" established between all of the project programmes. The Elements are summarised into a series of Hammocks to produce the overall Master Schedule and are connected to a series of Milestones designed to pick up progress information from each of the detailed project programmes later.

The Project Schedule

These detailed programmes are the driving force of the whole structure. Initially they are developed to meet the requirements of the master programme and once agreed, have their own baseline stored to allow the individual Project Manager to manage his/her project.

The programmes should be designed to allow all relevant cost and schedule data to be summarised into blocks identical to the activities in the Element Schedule, for transfer to Elements in the Master Programme for full OPM updating and reporting purposes. Milestones in the project programmes should match Milestones in the Master Programme to allow the two way transfer of progress information. Links should also be established with other project programmes if key "deliverable" are to be transferred from one project to the next, e.g. testing equipment.

Department Resource Programmes

The Department Level Resource schedule is another Key component of OPM. In our experience, cross project resource conflicts are one of the key constraints on the completing of individual projects.

To resource analyse the departments overall requirements and commitments, all of the relevant project or subproject programmes are merged into a single Department Programme and analysed against the available resources. The resource levelled schedule is then passed back to the various Projects Managers with information regarding the number of resources allocated to their project for the next period. The Project Manager is then free to rearrange his schedule within the overall resource limits imposed by the Department but cannot exceed these limits. The consequences of the Departmental scheduling are of course passed back up to the Master Programme in the summaries from each the individual project Programmes.

Consolidating the full resource demands on the Department into a single schedule also allows detailed resource planning for the whole department to be undertaken. Decisions on staffing levels, recruitment, etc., can be made based on complete information in adequate time to avoid unnecessary problems.

Date Exchange Requirements

The planning strategy outlined above requires the ready transfer of data between various levels of an organisation and to be successful requires the establishment of a series of Planning Data Standards.

Data exchange between the Department and project level is relatively straight forward, the relevant subproject programmes are simply absorbed into a larger version of the whole, complete with all of the relevant details and then down loaded after analysis. No data conversion takes place unless different types of software are used to overcome capacity problems and then all that is required is an Import/Export system. Moving data between the project programmes and the master programme is more complex as summary data from each project programme has to be transformed into detail (or actual) data for import into the Master Programme. This is not particularly difficult using a spreadsheet or database to make the changes on the way across and as suggested above, stopping the data at this point for verification and authorisation can be an advantage.

The more difficult problem is the efficient transfer of Milestone data between different projects, e.g. to transfer the date the oscilloscope in use on project "X" is available for use on project "Y". Typically these will be separate project files on different computers under the control of different Project Managers.

Micro Planning International has developed an effective solution to this problem, provided the various computers can "see" each other across a network. Micro Planner's "Transmitters" and "Receivers" allow dates to be passed from one totally independent project to another. The Transmitter holds the dates of the last analysis in its project and passively broadcasts the date. The Receiver is tuned to look for a particular transmitter and every time the project holding the Receiver is opened, it will seek out the transmitter and pick up the latest dates. Chart 3 displays that situation.

Progress Control - Time

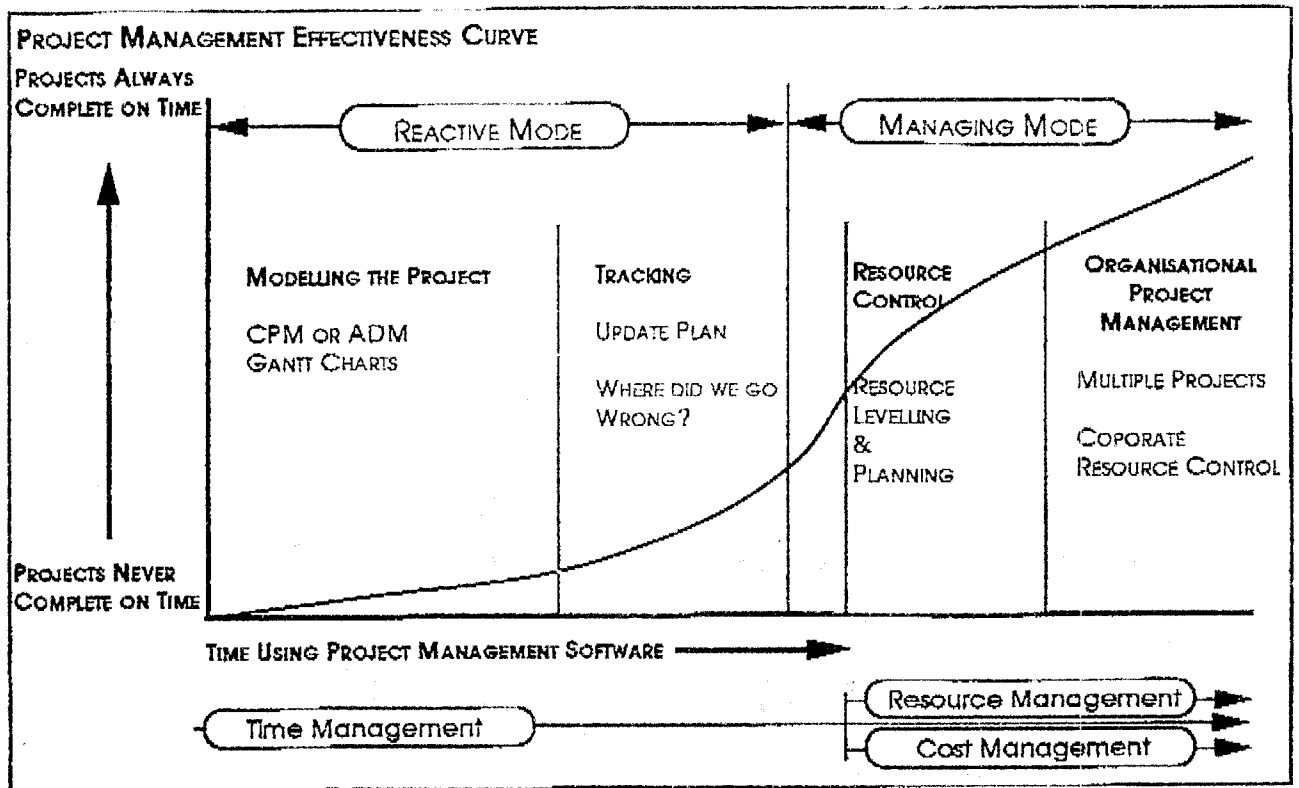
OPM assumes a dynamic planning and cost control process. As earlier projects are completed, resources become available to complete later projects.

Once each of the project programmes has been agreed and their baselines locked in, the management cycle set out in Chart 4 comes into play. The results of each status being passed on to the Master programme and the Departmental Programme. This process is the same as that used in any project that is being effectively managed and does not require much further comment other than to refer to the linkage between progress on the critical path measured by time based reporting and the quantity of work being completed that is discussed below.

Conclusion

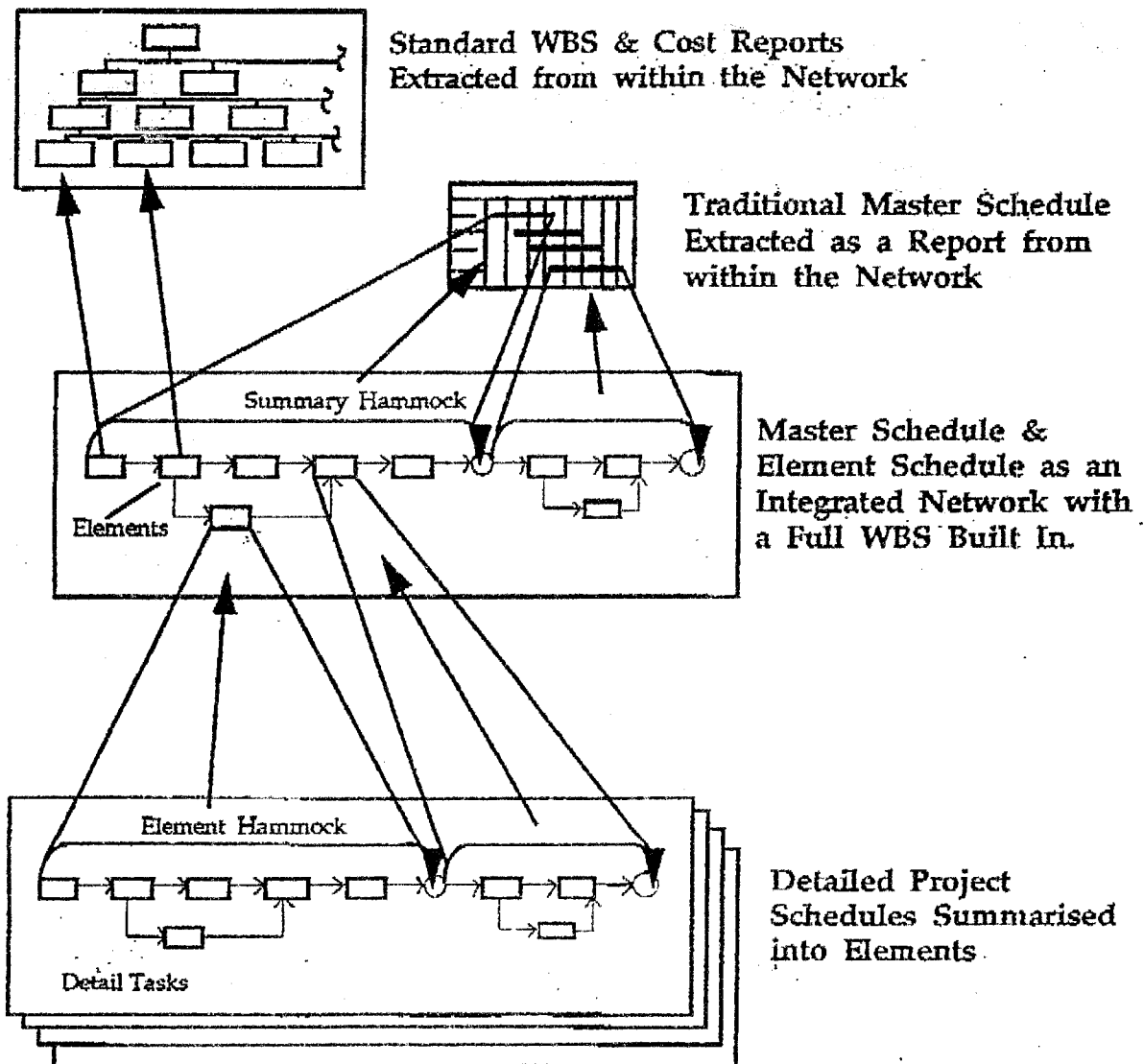
OPM is not a "quick fix" option. It is a practical development of the tried and tested project management methodologies that have been responsible for many successful projects since their inception in the 1950's. However, as with traditional project management, for OPM to be effective, the staff operating the system need appropriate skills, training and the right equipment.

CHART 1



Organizational Project Management

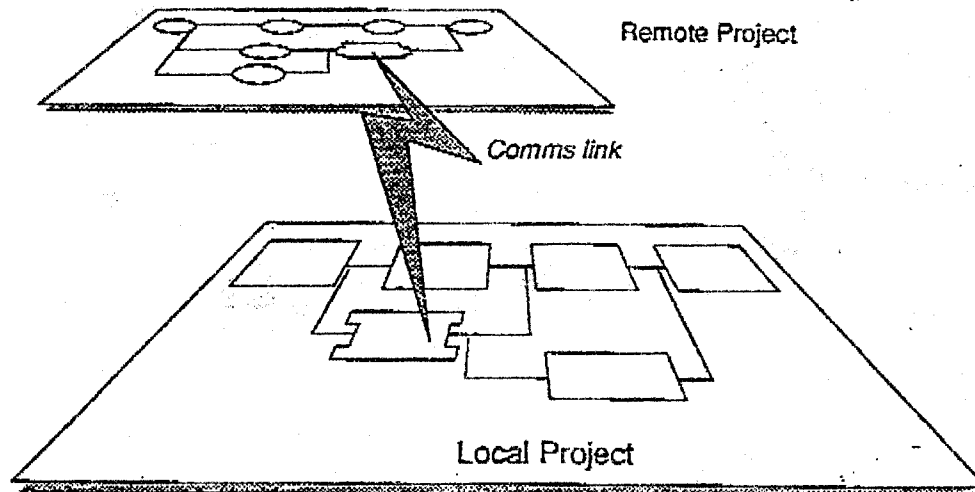
PROPOSED PROJECT SCHEDULE STRUCTURE



TRANSMITTERS & RECEIVERS

Example: Suppose that I have planted a Transmitter in my project, which informs you when I am going to complete a particular stage of the project, allowing you to proceed with the next phase. I then analyze my project and save it — the Transmitter is up to date and now available on my computer for you to access.

To access the Transmitter, you insert a Receiver node in your project.



Now I can either hand you my project file on a disk, or give you access to it over a network. The Receiver is now able to tune in to my Transmitter, as long as it can see and open my project file. All you need to know is the name of my project file and the number of the Transmitter node.

THE MANAGEMENT CYCLE

