A PROJECT WITHIN MICROSOFT PROJECT 2007

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Abstract
The main purpose of this article is to emphasize the innumerable advantages of the Microsoft Project 2007 projecting environment that a project manager could benefit of. More exactly,
*Project Management stands for a function that is recognized within the majority of domains. A project is defined as "a temporary effort made for creating a product or a unique service". A projects' administrative programme within an informational system (such as **Microsoft Project**, Primavera Planner) represents a "database that is in concordance with time". It should help proceeding the required operations and, at the same time, to look and behave the same way other frequently utilized productive programmes. It keeps accounts of all information regarding the job requests, period and the project's needed resources and visualizes the project's plan in standard, well-defined formats, organizes the activities and resources consistently and efficiently,shares information regarding the project with all **persons involved** in an intranet or Internet network, and communicates efficiently with the resources and other involved persons, permitting at the same time the project manager to take the final control/decision as his/her responsibility.*

Key words: *Project, Microsoft Project 2007, triangular method.*

Introduction

A project is temporary. A project's length of time varies from one week, for example, to even a few years, yet every project has a deadline. When starting to work at the project, there is the possibility of being unaware of its deadline, yet one knows that it occurs in the future. Even if they have a lot in common, the projects are not similar to the *progressing operations.* The name suggests the fact that the progressing operations continue indefinitely; one can not establish a deadline. For instance, one could mention the majority of the activities within the accounting and human resources departments. The projects are different from the processing operations because of an already established deadline.

ⓘ **A project requires effort.** Just like human and equipments, the **resources** also work. The effort is *undertaken* by a team or an organization, so that the projects appear as intentional, scheduled events.

ⓘ **Every single product creates an unique service or product.** The result or the project's final product represents the reason for which the project has been undertaken. A gas refinery doesn't produce a unique product. On the other hand, the commercial planes do stand for unique products.

Microsoft Project (or MSP) is a project management software program developed and sold by Microsoft which is designed to assist project managers in developing plans, assigning resources to tasks, tracking progress, managing budgets and analyzing workloads. The first version, Microsoft Project for Windows v1.0, started in 1987 on contract to a small external company. In 1988 the company was acquired by Microsoft, bringing the development project in-house where it was finished and released in 1990 as part of the company's applications offerings for Microsoft Windows 3.0. Microsoft Project was the company's third Windows-based application, and within a couple of years after its introduction **WinProj** was the dominant PC-based project management

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software. Further versions were released in 1992 (v3), 1993 (v4), 1995, 1998, 2000, 2002, 2003 and 2007. There was no Version 2 on either platform; the original design spec was augmented with the addition of macro capabilities and the extra work required to support a macro language pushed the development schedule out to early 1992 (Version 3). The application creates critical path schedules, although critical chain and event chain methodology third-party add-ons are available. Schedules can be resource leveled, and chains are visualized in a Gantt chart. Additionally, Project can recognize different classes of users. These different classes of users can have differing access levels to projects, views, and other data. Custom objects such as calendars, views, tables, filters and fields are stored in an enterprise global which is shared by all users. Microsoft Project and Project Server are the cornerstones of the Microsoft Office Enterprise Project Management (EPM) product.

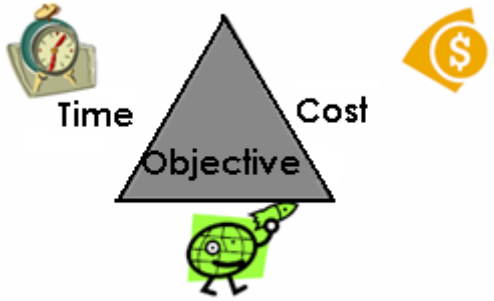
Literature review

Schedules, budgets, communications, resources-projects big and small include them all, and Microsoft Project 2007 can help you control these variables - not be controlled by them. But Project is complex software, and learning it is, a project in itself. Over the years and versions, Project has collected improvements. Yet one feature has gottenworse: Project documentations. To use Project successfully, you need to understand something about project management, but that is an exercise Microsoft leaves to its customers. There are many Internet resources, books and papers which serve as manuals that should have accompanied Project 2007, for example: Bonnie, Biafore, 2007, *Microsoft Project 2007: The Missing Manual,* Pogue-Press: O' Reilly; Carl, Chatfield, and Timothy, Johnson,2007, *Microsoft Office Project 2007 Step by Step,* Microsoft Press; Dave, Gochberg, and Rob, Stewart , 2008, *Microsoft Office Project Server 2007: The Complete Reference,* McGraw-Hill Osborne; Dale, A. Howard, and Gary, L. Chefetz, 2007, *Ultimate Learning Guide to Microsoft Office Project 2007*, Soho Corp; Elaine, Marmel, 2007, *Microsoft Project 2007 Bible,* John Wiley & Sons. The purpose of this article is to present in detail an example of a project, using Microsoft Project 2007 called *Dream House*.

Theoretical Background

The project's "triangular" method

One may visualize the projects' work in different ways, but the most favourite one is the so-called **project triangle**, having numerous options, however, the main idea is that every project includes a certain time restriction grade, a definite type of budget and requires a certain work tasks quantity (it has a defined objective).



Time. For many projects that create a product or a result when relating to an event, time represents the most important restriction that should be administrated. There is the possibility that the project's budget or the work's objective may be unknown, yet it is likely that one knows the project's time limit.

Cost. The costs represent all necessary resources for the project's realization. The cost includes people and equipments that work effectively, needed materials and all events and elements that require money or a person's involvement within a project. For almost all

projects, the cost stands finally for a restriction; there is also the possibility of projects exceeding the budget, without being necessary to make eventual corrective actions.

Objective. One should take into consideration two aspects of the objective:

✓ **Project's objective.** Every single project results in a unique product: an element or a palpable service. Usually, customers expect a series of characteristics and functions regarding the products they consider to buy.

✓ **Product's objective** describes sometimes in details the qualities, the characteristics and the desired functions regarding the product. The documents that offer such information are sometimes called *products specifications*. The services and the events have usually a series of foreseen characteristics. On the other hand, the project's objective describes the required operations of a product or service's delivery, having the product's desired specifications and objective. Even though the project's objective focuses on the client or the product's consumer, it is preoccupied mainly with the persons who will finalize the project. The project's objective is usually measured by *activities and phases*.

The product's objective and the project's objective are very similar. The project manager who administrates the project's objective should also realize that he/she should also know well the product's objective or how to communicate with people who are acknowledged with this type of data.

ⓘ Restrictions administration in regards to projects

The most sensible aspect which concerns the project's management is that of maintaining equilibrium between the restrictions of projects' objective, time and cost. The project triangle shows the process of realizing equilibrium between restrictions because all three triangle sides are connected, and one triangle side's alteration could affect at least one of the two remaining sides:

- If the project's plan duration (**time**↓) is reduced, it might need the budget (**cost**↑) increase, due to the fact that one needs to employ many resources that do the same work within a short time period. If one doesn't achieve to increase the budget, then it may need to reduce the objective (**objective**↓) because the available resources are not able to execute all operations that are scheduled for a short time period.
- If the project's budget (**cost**↓) decreases, one may possibly need a little bit more time (**time**↑) because it's impossible to pay so much resources with the same efficiency. If the time period doesn't increase, it is needed to reduce the project's objective, because fewer resources are not able to perform all scheduled operations in the remaining available time period. If a project's budget should be reduced, one should analyze the material resources **classes** for which the budgetary resources were established. An inferior class material is not necessarily a bad quality material. As long as the material class corresponds with the desired utilization, it could have good quality. One should also analyze the costs of human resources and equipment that were scheduled for utilization. A project manager should take into consideration (or better discuss with a decision factor) the advantages and risks of costs reduction.
- If the project's **objective**↑ increases, one may need more **time**↑ or many resources (**cost**↑) for the additional operation's performance. If the project's objective extends itself after the project's starting, then it is called **expanded objective**. The objective's modification of a project that was executed partially is not necessarily a negative fact; for example, there could be the possibility that the project's beneficiary was changed and a different product should be delivered to the new customer. A change in the project's objective has a negative influence only if the project manager doesn't execute the planning and the acknowledgment for the new requests – this situation occurs when the other restrictions (cost, time) are not analyzed correspondingly or, if it's the case, corrected.

Short Presentation of the Microsoft Project Display Environment

Introduction

Microsoft Projects is part of the Microsoft Office program 'family' for desktop computers, that's why many elements included in Microsoft Project are similar to those of Word, Excel and Access. For instance, the organization of the general menus bar and the instruments bar are very alike. Microsoft Project offers access to the same assistance instruments (*Help*), *Office Assistant* and *ToolTips*. On the other hand, many operations performed by *Microsoft Project* are different from those within other Office programs. Most of the elements displayed in the *Microsoft Project* program accept **indications** or **ToolTips labels**. In order to observe some of the available *ToolTips* labels, one should put the mouse cursor on the bars and data within *Gantt Chart* or on the buttons included in the instruments bars.

The creation of a project file

Project is mainly based on the time parameter. Almost all projects have a start date and finish to a subsequent date. Sometimes it is known only the intended start date for the project, the planned finish date, or maybe both dates. Yet, when working within *Project*, one specifies only a date, and not both: whether the project's start date or the finish date. After introducing the project's start date or finish date and the activities' **durations**, *Project* automatically calculates the other date. *Project* represents not only a static storage with information regarding the project, but also an active schedule instrument.

Even though one knows already the project's deadline, most projects should be scheduled beginning with a start date. The schedule based on the start date determines the actions' performance as soon as possible and offers the best flexibility in planning.

A *Project* file can be created (*New*), but one may also create a file based on a pattern. One may save any *Project* file as a pattern. When doing so, one could choose information that could be excluded from the pattern, such as planned or real programmes or information about the costs.

The work interface within *Project* is called **view**. Project contains tens of views, yet normally, at a given time one should work only with one (and sometimes with two). The views are used for introduction, editing, analyzing and displaying the information regarding the project. The already established view is the *Gantt Chart* View.

There are many commuting methods between views:

- One should select a view out of the most frequent used, which are displayed in the *Views* bar that is situated in the left margin of the *Project* window.
- One selects a view from the same view set within the *View* menu.
- One could visualize all available views by selecting the ***M**ore Views*... command from the *View* menu.

Every view focuses on the details in regard to **task**, **resource** or **assignment**. In many views, these details are organizes into **tables**. The pre-established table from the *Gantt Chart* View is know as the **Entry** table and contains information about tasks. A table stands for a data grid which is similar to a calculation sheet that is organized into rows and columns. Every row contains information about a single task or resource. Every column describes a single value of that particular task or resource.

The *Resource Sheet* View is concerned with the resources' details. The pre-established table for this view is an *Entry* type one. One may also commute to another table in order to see other details about resources.

Using the *Task Usage* View one may visualize tasks within the left numbered rows, and under these, the resources assigned to every task. There is a *timescale grid* that contains daily work

values for every allocation. Just like *Gantt Chart* and other views within *Project*, the *Task Usage* view is divided in two zones. Every single zone has its own horizontal scroll bar.

In order to change the table which appears in a view, one needs to position the mouse cursor on the *Table* option within the *View* menu and select the table. By commuting the tables, the information displayed in the view modifies, but the effective information does not.

The methods used for controlling data displayed in *Project* are:

- One should select the view that organizes and presents in big raws information regarding tasks, resources or assigments.
- Within the selected view, one chooses a task or a resource (not all views accept tables).
- One may filter, sort or organize the data, using another way which fits the purpose.

Besides using this incorporated tables and views, one may also personalize or create his/her own.

Within the *Project* window, one may display simultaneously two views. For instance, one could display the *Gantt Chart* view in the upper panel and the *Task Usage* view in the window's below panel. If this arrangement is used, the task that is selected in the upper panel changes what one may see in the below panel. In a similar way, scrolling the temporary grid in the below panel modifies the temporary grid from the upper panel of the *Gannt Chart* view.

The *Resource Allocation* and *Task Entry* views are both pre-defined views for divided screens and other combinations. One may also display two chosen views by using the *Split* option from the *Window* menu. After the *Project* window gets divided in two panels, one may choose the desired view in order to display it in that particular location. If one wishes to get back to the one-view mode, he/she should select the *Remove Split* option from the *Window* menu.

Case study: dwelling house construction –"Dream House"

Tasks introduction

Tasks stand for fundamental constitutive blocks of a project- they represent the actions that should be made for accomplishing the project's objectives. The tasks describe the project's work in terms of sequence, duration and resources request.

Within *Project*, one of the locations where views are introduced is the *Gantt View*. In the pre-established *Gantt View*, the bar diagram appears in the right side, and a table is displayed in the view's left side (the *Entry* table appears in a pre-established way, but one could also display any other table). Even though the *Entry* table may look similar to a grid from a Microsoft Excel spreadsheet, it behaves more like a database table. Every row within an Excel table describes a single activity, to which a **task identifier (task ID)** is attached.

Task identifiers appear in the task row's left side and the column titles, such as *Task Name* and *Duration*, are field patterns. The meeting point between a raw (or task) and a column is called cell or field. Actually, the internal architecture of a *Project* file has much more in common with that of a database file such as Microsoft Access, than to the architecture of a spreadsheet application such as Excel.

Within the *Entry* table, on the *Task Name* column, one may introduce the tasks. *Projects* allots a one day period for all new tasks. The question mark shows that there is an estimated duration.

	Task Name	Duration
1	Schedule finalization and estimations of owner and architect	1 day?
2	Contract signing and work progress's official reports	1 day?
3	Foundation project consent at the Civil Defence	1 day?
4	Construction affiliated consent with the four poles	1 day?
5	Electric plant project consent	1 day?
6	Sanitary installation project consent	1 day?
7	Ventilation installation project consent	1 day?
8	Other diverse security consents	1 day?
9	Terrain cleaning	1 day?
10	220V generators installation	1 day?
11	Inner terrain equipments installation	1 day?

Task duration stands for the estimated time quantity till the task finalization. The total project's **duration** is determined by means of calculating the difference between the start date and the last date of finishing the tasks that compose it. The project's duration is also influenced by other factors, such as the relationships between the tasks. Due to the fact that *Project* makes a distinction between the working time and the off time, task duration is not necessarily connected with the elapsed time. Yet, there is the possibility to plan tasks to run both during working periods and off periods. In order to do so, one needs to assign an **elapsed duration** to a task. The *PERT analysis* (Program Evaluation and Review Technique) may be considered a useful tool for estimating the tasks duration. The *Project*'s *Office Assistant* modulus ("*Estimate task durations by using PERT analysis*") offers more information in regard to this subject.

When using the *Project* application, one may use duration abbreviations:

Abbreviation	**Display**	**Meaning**
m	min	Minute
h	hr	Hour
d	day	Day
w	wk	Week
mo	mon	Month
em	emin	Elapsed minute
eh	ehr	Elapsed hour
ed	eday	Elapsed day
ew	ewk	Elapsed week
emo	emon	Elapsed month

The pre-established values are necessary: 8 hours/day, 40 hours/week and 20 days/month. When creating those tasks, *Project* allots one day estimated duration for each (the question mark within the *Duration* field shows the fact that duration represents an explicit estimation, even if actually, all task durations should have been taken into consideration as estimations until the task's ending).

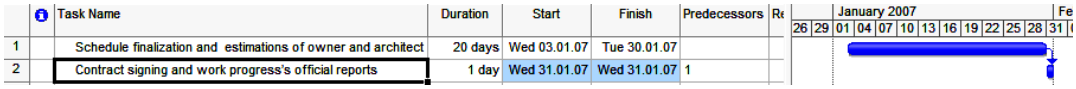
One introduces the following data for tasks:

	Task Name	Duration
1	Schedule finalization and estimations of owner and architect	20 days
2	Contract signing and work progress's official reports	1 day
3	Foundation project consent at the Civil Defence	2 days
4	Construction affiliated consent with the four poles	2 days
5	Electric plant project consent	1 day
6	Sanitary installation project consent	2 days
7	Ventilation installation project consent	1 day
8	Other diverse security consents	3 days
9	Terrain cleaning	1 day
10	220V generators installation	1 day
11	Inner terrain equipments installation	1 day

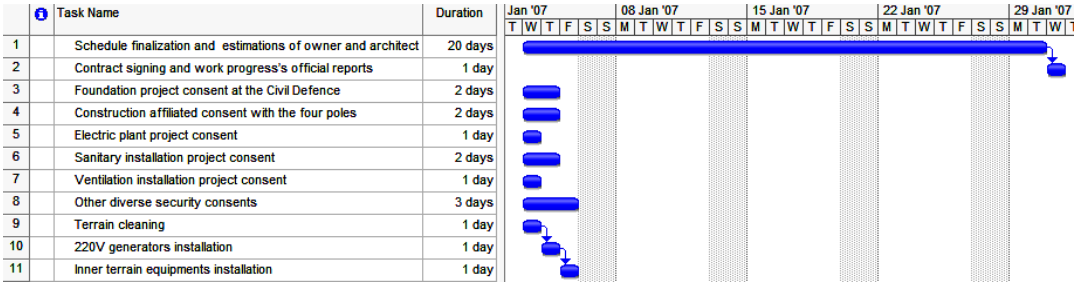
The projects assume the tasks' performance, having a certain order. There is a Start-to-Finish **relationship** between two tasks, so that one could define four types of relationships between tasks:

FS	Finish-to-Start	The finishing date of the preceding task determines the starting date of the subsequent one
SS	Start-to-Start	The starting date of the preceding task determines the starting date of the subsequent one
FF	Finish-to-Finish	The finishing date of the preceding task determines the finishing date of the subsequent one
SF	Start-to-Finish	The starting date of the preceding task determines the finishing date of the subsequent one

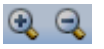
The tasks 1 and 2 are connected through a Finish-to-Start relationship (one should select the tasks 1 and 2 on the button and press the (*Link Tasks)* button from the Standard Toolbar). *Project* changes the start date of the task 2 in the next working day that follows the task 1's finalization. In order to cancel the relationships between the tasks, one should select those tasks among which the relationship must be cancelled and then press the (*Unlink Tasks)* button. If one cancels a relationship for a single task which is part of a task chain connected with a Finish-to-Start relationship, *Project* remakes the relationships between the chain remaining tasks.



The 3-8 tasks have the same start date, but the 9, 10, 11 tasks are chained:

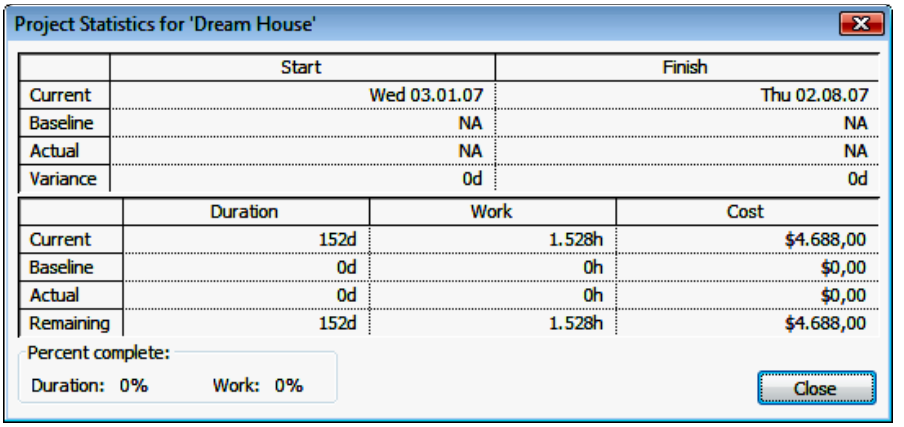


	Task Name	Duration
1	Schedule finalization and estimations of owner and architect	20 days
2	Contract signing and work progress's official reports	1 day
3	Foundation project consent at the Civil Defence	2 days
4	Construction affiliated consent with the four poles	2 days
5	Electric plant project consent	1 day
6	Sanitary installation project consent	2 days
7	Ventilation installation project consent	1 day
8	Other diverse security consents	3 days
9	Terrain cleaning	1 day
10	220V generators installation	1 day
11	Inner terrain equipments installation	1 day

In order to change the scale time in the *Gantt Chart* view, one should use the  buttons *(Zoom In and Zoom Out).*

Project duration

A simple method of finding out the project's total duration is the examination of the *Project Information* dialogue box, the *Statistics* button. One could edit the starting date but he/she can not edit directly the finish date because this project is adjusted to be planned on a start date basis. One may visualize the project's total duration, based on the duration of tasks and relationships between the inserted tasks.



Project Statistics for 'Dream House'

	Start	Finish
Current	Wed 03.01.07	Thu 02.08.07
Baseline	NA	NA
Actual	NA	NA
Variance	0d	0d

	Duration	Work	Cost
Current	152d	1.528h	$4.688,00
Baseline	0d	0h	$0,00
Actual	0d	0h	$0,00
Remaining	152d	1.528h	$4.688,00

Percent complete:
Duration: 0% Work: 0%

Close

Tasks' organization into phases

Within Project, the phases are represented by **summary tasks**. A summary task behaves different from other activities. One can not directly edit duration, starting date or other scheduled values because these are derived from detailed tasks. The summary tasks are useful for those who want to obtain information about the project work's phases.

The main project management's objective: *the top-down* and *the down-top schedule*:

The top-down planning	**The down-tip planning**
Identifies the important project's phases and products before specifying the necessary tasks for finishing these phases. The complex projects may have more phase levels.	Identifies as many low level detailed tasks as possible, before organizing them into logical groups that are also known as phases or summary tasks.
It works from general to detailed.	It works from detailed to general.

The project objectives evolve usually from top to bottom; whereas project's scheduled details tend to have a down-top development. The creation of correct activities and phases for more complex projects implies a combination between the top-down schedule and the down-top one.

Summary task and additional tasks' introduction:

✓ Within the *Entry* table, click on task 1;

✓ Within the *Insert* menu, click on the *New Task* command;

✓ Within the new task that corresponds to the *Task Name* field, one introduces the **Dream House** text (in fact the project);

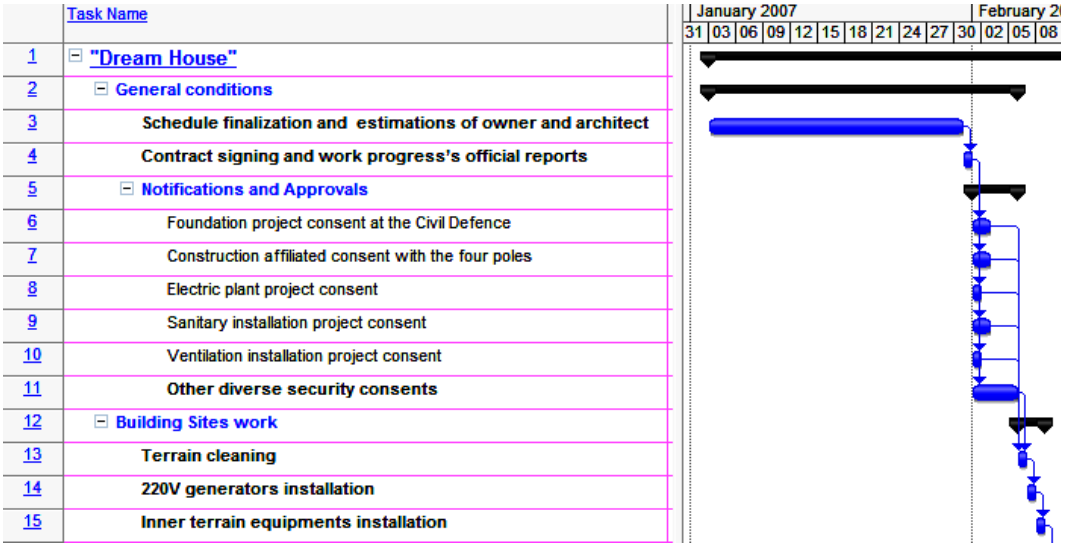
✓ One should further add other tasks (**phases**): **General conditions**, **Notifications and Approvals**, **Building Sites work**;

	Task Name	Duration
1	Dream House	1 day?
2	General conditions	1 day?
3	Schedule finalization and estimations of owner and architect	20 days
4	Contract signing and work progress's official reports	1 day
5	Notifications and Approvals	1 day?
6	Foundation project consent at the Civil Defence	2 days
7	Construction affiliated consent with the four poles	2 days
8	Electric plant project consent	1 day
9	Sanitary installation project consent	2 days
10	Ventilation installation project consent	1 day
11	Other diverse security consents	3 days
12	Building Sites work	1 day?
13	Terrain cleaning	1 day
14	220V generators installation	1 day
15	Inner terrain equipments installation	1 day

✓ One defines the phases. For instance, for the **Notifications and Approvals** phase, one selects the 5-10 tasks and press the *(Indent)* button;

✓ One links the tasks. For example, for the **Building Sites work** phase, one selects the 13-15 tasks and press the (*Link Tasks)* button.

Resources Configuration



The resources are represented by people, equipments and needed materials for project's task performance. *Project* focuses on two resources' aspects: the *availability* and the *cost*. The availability determines the moment when a certain resource deals with a certain task and the amount of time for working; the costs refer to the amount that is necessary to be paid for that particular resource.

Comparing to the planning tools that focus on the task (agenda), the resources administration is effectively the most important advantage of using the *Project* application.

Project deals with two types of resources: work and material resources. The work resources stand for the persons and equipments that execute the project's effective work.

The resources are inserted in the *Resource Sheet* view, on the *Resource Name* column. One needs some explanations regarding the *Max. Units* field. This represents the maximum capacity of a resource performing any task. If the maximum number of units for a resource is mentioned, it means that 100% of resource's time is available for working its allocated tasks. *Project* gives a warning if a resource's is attributed more tasks than it could execute at a maximum work capacity (in other words, it becomes overallocated). Within the *Type* field, one should select the *Work* (or *Material)* option for each and every resource.

Personnel and equipment resources are adjusted in the same way. There are several important differences regarding the way in which these two types of resources may be scheduled. For instance, the majority of the personnel resources do not have working days that last more than 12 hours, yet, the equipment resources may work more slowly. Moreover, the personnel resources may be more flexible in regard to tasks they can perform, while the equipment resources tend to be more specialized. One doesn't need to keep book of all equipment pieces that are going to be used in the project, however, it is recommended to configure the equipment sources when:

- Many teams or persons need simultaneously an equipment piece for performing different tasks and the equipment could be reserved in many more places than it can afford.
- There is a desire for organizing and recording the costs related to the equipment.

The budget or the cost stands for one of the *project triangle* model's components. Almost all projects have a certain financial aspect and the costs control numerous projects' objectives. The purpose for assigning a standard paying rate (*Std. Rate*) for a material resource is that of estimating as correct as possible the materials' costs compared with the project's plan (and subsequently keeping track of them). Not all resources are paid at a direct standard rate. For some resources, one needs to pay overtime (*Ovt. Rate*), due to the fact that it works more than an estimated number of hours for an estimated time period. The cost doesn't increase in the same way for all resources. For example, when renting an equipment, it might be necessary to pay a rental fee, yet the employees tend usually to rise the price once the time goes away. Within *Accrue At*, one specifies the way how *Project* should deal with a resource's cost increase (for instance, if the rental fees must be paid until using the equipment, one fixes *Start* in the *Accrue At* field).

	Resource Name	Type	Max. Units	Std. Rate	Ovt. Rate	Accrue At
1	Works contracted firm	Work	100%	$0,00/hr	$0,00/hr	Prorated
2	Excavation firm	Work	100%	$2,00/hr	$4,00/hr	Prorated
3	Architect	Work	100%	$8,00/hr	$12,00/hr	Prorated
4	Possessor	Work	100%	$0,00/hr	$0,00/hr	Prorated
5	Terrain concession	Work	100%	$0,00/hr	$0,00/hr	Prorated
6	Electricians	Work	100%	$3,00/hr	$6,00/hr	Prorated
7	Electricians firm	Work	100%	$10,00/hr	$20,00/hr	Prorated
8	Plumbers	Work	100%	$3,00/hr	$5,00/hr	Prorated

Resources' assignment to tasks

An **allocation** or an **assignment** stands for an association between a resource and a task in order to perform operations. Speaking from the tasks' perspective, this could be known as a task assignment, whereas from the resources' perspective, it could be called resource assignment. A task plus a resource represent an assignment. One doesn't need to assign resources to tasks within Project; he/she could operate only with task. If resources are allocated to tasks, then the following questions could be answered:

- Who should work, perform what tasks and when?
- Is there a corresponding number of resources for accomplishing the work quantity requested by the project?
- Is there the possibility that a resource work at a task in a period of time when that particular resource is unavailable for work (for example, when will the resource be absent)?
- Was there a resource allocated to so many tasks that the resource's work capacity exceeded – in other words, the resource become overallocated?
- Could one evaluate the resource's performances while comparing to a pre-established plan? A resource which seemes to be very busy and need double amount of time for performing a task, compared to other resource, may not be as productive as it appears.

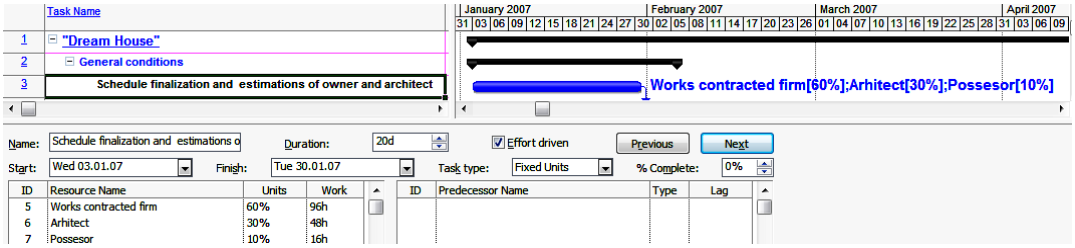
Assigning a resource to a task allows an evaluation of the resource's progress while working with that particular task. If information regarding costs is introduced, *Project* also calculates the costs for the resource and activity. A resource's work capacity is measured by units and is recorded within the *Max.Units* field. Except the case when it's not mentioned, *Project* assigns 100% of resource's units to the task. If the resource has less than 100% of the units' maximal number available, *Project* assigns the maximal value of the resource's units.

Project calculates work, using the so called sometimes sheduled formula method:

Duration x Units = Work

The Task 8 lasts for one week. For the existing project, one week covers 40 hours (one could find out how many hours a week is made of, by opening the *Tools* menu, choose the *Options* command and click on the *Calendar* etiquette).

Within the *Gantt Chart* view, one clicks on the 3rd activity's name – "Schedule finalization and estimations of owner and architect"; then choose the *Slip* option from the *Windows* menu. On the screen appears the *Task Form* box, within the bottom panel of the *Project* window. *Task Entry* displays the *Gantt Chart* view in the *Project* window's upper panel and the *Task Form* view in the panel below. *Task Form* simultaneously displays all three variables from the scheduled formula: task's duration in the *Duration* field, resource's units within the *Units* column and the resulted work value for attaching to task in the *Work* column.



If one adds resources to tasks after an initial assignment, the total amount of work hours remains the same, yet, it is distributed between the assigned resources. The task's duration decreases correspondingly, the validation sign (implicit) within the *Effort Driven* validation box shows the fact that the effort driven schedule is activated for the task 3. It is not compulsory the effort driven schedule to be applied to all project's task; when needed, one may deactivate it (in this case, the task's duration remains the same, no matter how much resources are assigned).

Conclusions

Microsoft Office Project 2007 gives you robust project management tools with the right blend of usability, power, and flexibility, so you can manage projects more efficiently and effectively. You can stay informed and control project work, schedules, and finances; keep project teams aligned; and be more productive through integration with familiar Microsoft Office system programs, powerful reporting, guided planning, and flexible tools.

Project 2007 integrates smoothly with other Microsoft Office system programs. Build projects with a few keystrokes by converting existing task lists in Microsoft Office Excel and Microsoft Office Outlook into project plans. With Project 2007, you can easily assign resources to tasks and adjust their assignments to resolve conflicts over allocations. Control finances by assigning budgets to projects and programs. Improve your cost estimates with Cost Resources.

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