Synchronizing Project Information

Overview

Microsoft Project 98 and 2000 users have synchronization functions provided directly on the toolbar within Microsoft Project which should be used for all synchronization. Please see the appropriate chapter for further instructions. Microsoft Project 2000+ users MUST use the toolbar functions for the Synchronize Update Project process, there is no way to do that function from the Notes client dialogs.

For other planning applications, the Synchronize Project Information command is used to update your project management system with the latest status found in the Notes database and to update the Notes database with revised plans. For many projects, you will want to synchronize weekly.

It is important to understand that this is a two stage process. First, you will use synchronize to update the project model with the latest actuals. Then, after reviewing the implications of the current progress and adjusting future activities in the project management system, you will save the revised plan and use the synchronize command to update the Notes database with the revised schedule.

Two Way planning, which allows participants to participate in the scheduling process, and Differential synchronization are described in this chapter

If you are using Repository Schedules (Lotus Components), the synchronization process is implemented using action buttons on the Repository Schedule form rather than with the Synchronize command. See instructions in the Repository Schedules chapter.

Synchronization is a somewhat complex process, although the commands to invoke it are very simple. There are many special situations that arise due to particular combinations of project and repository data and changes that have been made to one side or the other. There are also a number of special purpose options that can be used for particular situations.

The process is conceptually simple. In one direction actuals reported on assignments in Notes repository are transferred to the corresponding assignments and tasks in the project plan. In the other direction, after recalculation and review by the project manager, the updated plan is used to update the planned dates and efforts of unstarted activities in the repository.

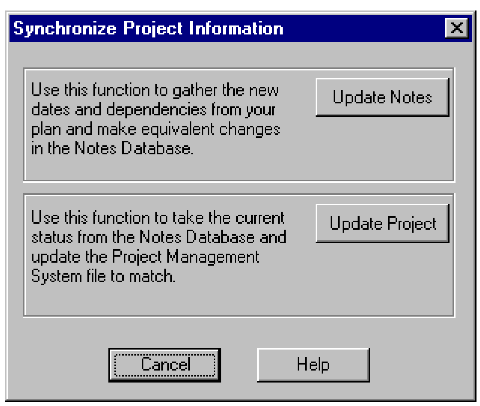
Do not enter actuals or change task status in the planning system once a project has been published. These changes will not be synchronized to the repository because Project Gateway believes that the actuals it finds in the repository are the correct values and will not override them. Specifically, if the repository assignment has an actual start date, changes made to actual start, finish, or effort in the project plan will be ignored when the assignment is updated. Conversely, and with some specific but important exceptions, changes made to planned dates in the repository will not be transferred to the project plan, because the planning system considers these dates to be calculated results, not user inputs. Task duration's, on the other hand, are often adjusted to accommodate changes in projected work made by repository users.

Thus, project managers who are accustomed to entering status into their plans or adjusting actuals reported by others will find that Project Gateway does not return these changes to Notes and will force the Notes reported actuals into the project plan during each update. There is an override to this rule for special situations. (See the ResetAllNotesActuals option in the appendix covering INI files)

Note: Microsoft Project users should use the macros provided with Project Gateway that allow synchronization to be done from within the Microsoft Project Application. See the chapter "Using Microsoft Project" for instructions.

Using The Synchronize Command

Invoking the Synchronize Project Information command from the Notes Actions menu will display the Synchronize Project Information Dialog.

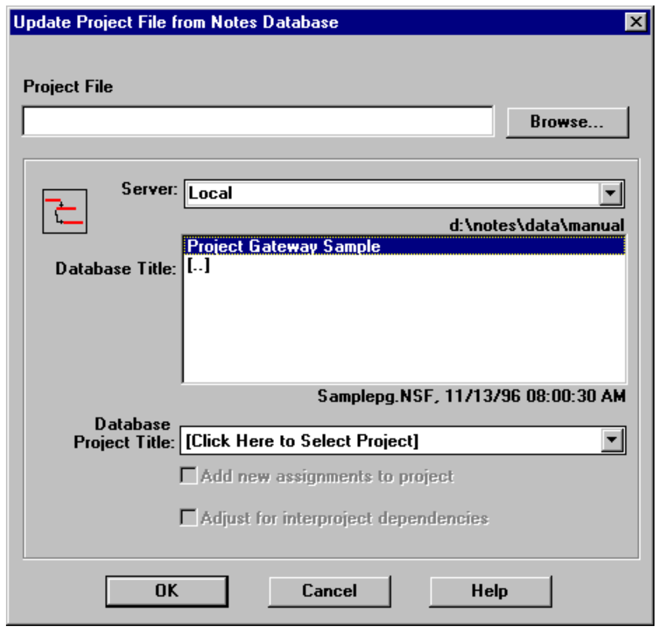


The purpose of this dialog is to select the direction in which changes flow. Generally, you should use *Update Project* first to bring actuals to your project plan, then, at a later time, use *Update Notes* to bring the revised plan to your project participants.

Synchronize Update Project

Update Project Dialog

This dialog appears when the Update Project button is pressed on the Synchronize Project Information dialog. Note that this function cannot be used in conjunction with Microsoft Project 2000. You must use the toolbar commands within Project to accomplish this function.



Note: If your server name does not appear in the dropdown list, you may enter it manually in the Server field.

You must select the project management file, the Notes Database, and the particular project within the database if there is more than one.

File/Project Association

Project Gateway remembers the association between the project in the database and the file that you most recently used to synchronize it with. When you select Database Project Title before entering the project file, the selection of the database project will automatically fill in the project file selection with the file name most recently synchronized with this project.

Limited Project List

If you fill in the "Manager" field in the Project Gateway/Setting dialog, the Database Project Title List will show only those projects for which your manager name appears in the Manager section of the Project Profile form, plus those projects which have no manager named. This means that, even if your department repository has several hundred projects, only those few that you are managing will appear in the list for synchronization. If you want to see all projects in the database, just clear the Manager field in the Setting dialog before using the Synchronize command.

Add new assignments to project

This option is enabled only when a Microsoft Project, or Primavera project plan has been selected. If checked, the synchronize process will add new assignments, tasks, and resources that may have been composed in the Notes database to the project plan. If not checked, data will be transferred only for assignments, tasks, and resources that already exist in the project file. New tasks will generally appear at the end of the project outline and will have a start date constraint set to the planned or actual start date indicated in the Notes assignment form.

Implement InterProject Dependencies

This checkbox works in conjunction with the InterProject Dependency (IPD) form to impose delays in projects when they are dependent upon scheduled events in other projects in the repository.

When this checkbox is checked, Project Gateway scans the list of InterProject dependencies defined in the database to see if any tasks in this project are dependent events. If such dependent tasks are found, and if the InterProject dependency form requires the dependent task to be delayed, then the dependent date is calculated from the current date of the controlling event. Project Gateway then imposes a project management constraint on the task, either **start no earlier** or **must start on** depending upon the instructions in the IPD form.

Two Way Planning

Two Way Planning is an important set of feature extensions that allow participants to change project plans with the consent of the project planner. In the current release, these features are implemented for use with Microsoft Project, Project Workbench, Primavera P3 and SureTrak, Open Plan, and Repository Schedules.

User Date Revisions

When a plan is published, the scheduled start and the scheduled finish dates are displayed in the assignment form.

When the user changes the scheduled start or scheduled finish so that they are different from the original values using the Notes editor, the user is considered to have made a schedule revision.

The view, *Outline w/User Revisions and Notes* will display all assignments whose scheduled start or finish has been manually modified since the last synchronize from the project management system. The revised start and revised finish columns of this view will display the number of days earlier or later than the original plan dates.

The Project Profile document contains an option: "Enable Two Way Planning". This is preset to "No" when the project is created. This option can be set to Yes by editing the Project Profile document.

During the *Synchronize Update Project* process, the Notes documents are examined. If the "Enable Two Way Planning" parameter has been set to Yes, those assignments containing schedule revisions are marked for special processing. The exact effect of the changes is dependent upon the planning system used, but the general effect is to change the project plan to incorporate the user's revisions.

The Note to Project Manager Feature

When text has been entered in this field, the assignment will be included in the Outline w/User Revisions and Notes view.

When Synchronize Update Project is done, the contents of this field will be added into the task note or the assignment note. When added to the task note, the name of the resource is added as a prefix to the text of the note i.e. {Dale:<message>} Not all systems support this feature, see the specific chapter on your planning system.

How Two Way Planning appears to the users

When the plan is published or updated in the database, all tasks will have their schedule dates equal to the dates specified in the project plan.

When a user makes a scheduled date change in Notes, that assignment will appear in the Outline w/User Revisions... view.

Before synchronizing, the project manager should look at this view to see if the user specified changes are acceptable. If not, the project manager should either disable Two Way Planning in the project profile form or negotiate changes with the users before synchronizing.

When the synchronization is performed, the changes will be made in the project plan which will probably affect the schedule, perhaps in a significant way. Before saving these changes, the project manager should review their impact.

When the project manager does *Synchronize Update Notes* with the updated project plan, all the assignment documents in Notes will be updated with the latest project plan dates so that no tasks will show revised dates in the Outline w/User Revisions...view.

So, at the completion of the cycle the participants will see scheduled dates as calculated by the project application. These dates will contain their revisions to the extent permitted by the project manager and the scheduling application.

Reasons why users get back a schedule different from the dates they supplied

1. The project manager may not enable two way planning so the user supplied revisions are ignored when replanning and replaced when Notes is updated. Another possibility is that the project plan is built using a system that does not currently support two way planning. A third possibility is that the Notes database may have been updated from the project before the project was updated from the database.

2. The user revised start date may be earlier than the date calculated based upon predecessors in the project plan, hence it will be moved to a later date.

3. The user revised start date may be a holiday in the project plan so the scheduler will move it forward to a workday.

4. The user revised finish date may be on a task that is resource driven. In this case, Project Gateway will not be able to directly set the end date, but it will inform the Project Manager of the desired end date which he or she may be able to generate by adjusting the workrate of the resource assignment in the plan.

5. The user revised finish date on a fixed duration task may be too soon to accommodate the effort planned on the task, in which case it will be pushed forward to a later date.

Update Project: Sequence of Processing

1. The Notes database is opened and the Stored Project Model is retrieved and updated with the current status from the assignment documents.
2. The Project file is opened and read.
3. The assignments in the Notes database are matched with those in the project management file. This process is described later in this chapter.
4. If the "Confirm every synchronization" checkbox on the Setting dialog is checked, a message will appear allowing you to continue or cancel the update of the project plan. At this time you can, if you wish, check the contents of the Sync.Txt report file to ensure that matching was done to your liking.

   For some project types, a helper application, "Project Gateway Transfer" is invoked by Project Gateway to perform the actual data transfer. It will appear briefly at the bottom of the screen on the toolbar or as a minimized icon. It will disappear when the project information has been read.
5. The Project File is duplicated (to maintain a backup) and the new copy is edited with new information for those matching assignments. When successfully completed, the previous version of the project file will be renamed as a .BAK file and the updated file will have the original name. **Note: This is not done for Primavera or Open Plan databases, you must maintain you own backup copies.**

6. The "Launch" dialog will appear to allow you to immediately invoke the project management system with the updated file.

Once you enter the project management system you should recalculate (if this does not occur automatically) to see the impact of the actual information. Do not be surprised if scheduling problems are reported after recalculation. Reality is frequently inconsistent with the structure of plans and each project system has its own "attitude" toward information that is inconsistent. The problems that arise are not being caused by the synchronize process; they would occur if you entered the same information manually.

Common problems during recalc after synchronization

- Dependency violations: Tasks may have been done out of the planned sequence. To eliminate the recalc errors you may have to remove some of the predecessor/successor links specified in your project on the tasks that have been actually started.
- Actuals may be reported that are "impossible" because they occurred on holidays or outside of normal working hours. Some systems, will automatically change the actual date to the next workday. Microsoft Project will often complain about fixed duration tasks that are not completed within the resource's assigned workday hours. Changing the task to resource driven, or adjusting the duration will usually correct the problem.
- Actuals that are greater than plan. This may require you to increase the planned duration or resource assignment to accommodate the actual effort. Whenever large differences arise, you should double check the corresponding assignment document to make sure it is correct.

Unassigned Tasks

In the Notes database, individual tasks that do not have resources assigned in the project plan will have "unassigned" assignment documents. Most project systems will only allow you to report actual work hours on a resource assignment. Therefore, if a task has no assignments, hours reported in the Notes database will not be posted in the project plan. However, the actual start and finish and percentage complete will be posted.

Recovering the backup version.

It is possible that, upon viewing the updated project, you realize that there are substantial errors in the Notes database. Rather than trying to correct them in the project plan, it may be easier to correct the Notes information and resynchronize.

Using the Windows Explorer, find the backup version of the project file, it will always be in the same directory as the project file and will have the extension .BAK and should be of a similar size. Delete the current file (plan1.mpx for example) and rename the backup file (*plan1.bak* to *plan1.mpx*). This will restore the files to the pre-synchronized state.

Synchronize Update Notes

Update Notes is used when you have a new version of the project schedule that you want to publish to the project participants. This would occur in two situations. The first, and most common, would be after posting the actuals (using Update Project). The second would be during the "getting started" process of a new project when you might revise the plan frequently based upon discussions with the proposed participants.

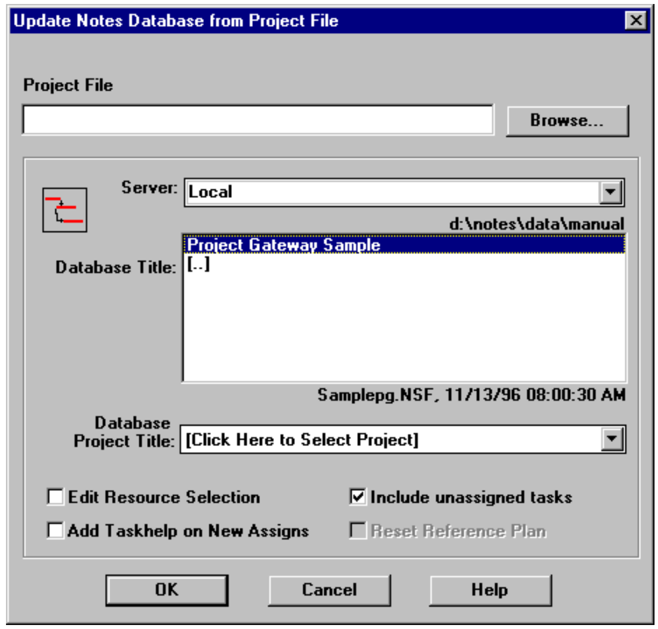
Update Notes will revise all existing assignment documents of the selected project and will create new assignment documents for work that has been added to the project plan since the Notes database was created or last synchronized. It will create new Participant documents for resources that have been added to the project plan if you have the right to do so (otherwise the process will stop with a warning message identifying the participants that were attempted to be added). It will modify the Project Profile document both by adding to the revision history and also by deleting the existing .CPF file and replacing it with a current version corresponding to the updated project. When an assignment document is modified, the revision history field will be extended to record the date of the change and a note of the significant modifications made.

Update Notes will not delete any documents from the database, even if these were created for tasks that have been subsequently deleted from the project management plan. It preserves these documents because they might contain comments, reports, or attachments of valuable project information. Such documents, however, will not be displayed in any of the normal Assignment views. These documents may be found using the Reports Navigator, "Obsolete Assignments view”. When opened from that view they will display a message to the user indicating that they are no longer part of the plan.

Update Notes Dialog

In any case the first step is to save the updated plan in the appropriate format (.MPX for Microsoft Project). Note: If you are using Primavera, make sure to run the Tools\Update Data Dictionary Advanced function after making changes to the plan and close Primavera before initiating synchronization.

Press the Update Notes button on the Synchronize Project Information dialog to display the Update Notes Database dialog.



You must select the project file using the Browse button and the Notes database using the Server and Database lists. Look carefully at the file names and dates that are displayed to make sure you have picked the correct files!

Since Project Gateway databases can contain more than one project, the "Database Project Name" field allows you to choose which project is to be exported. The field displays the "Click Here..." prompt. When you click it, a drop list will appear showing the names of all projects in the database. Click on the desired project title to select it.

Note: If your server name does not appear in the dropdown list, you may enter it manually in the Server field.

File/Project Association

Project Gateway remembers the association between the project in the database and the file that you most recently used to synchronize it with. When you select Database Project Title before entering the project file, the selection of the database project will automatically fill in the project file selection with the file name most recently synchronized with this project.

Limited Project List

If you fill in the "Manager" field in the Project Gateway/Setting dialog, the Database Project Title List will show only those projects for which your manager name appears in the Manager section of the Project Profile form, plus those projects which have no manager named. This means that, even if your department repository has several hundred projects, only those few that you are managing will appear in the list for synchronization. If you want to see all projects in the database, just clear the Manager field in the Setting dialog before using the Synchronize command.

Checkbox Options

The checkboxes on this dialog are similar to those found on the Create Notes Database From Project File dialog. Generally you will want to check "Include unassigned tasks."

Edit Resource Selection and Add Taskhelp would only be checked if those same functions were used at the time of database creation.

Reset Reference Plan

The reference plan is the set of dates for assignments that is used for measurement purposes. Generally these are the "baseline" values for projects that have baselines. Project Gateway automatically saves a set of "reference" values when the project is first created. If you want to update these values, you must first edit the Project Profile document to set the "Reset Reference Allowed" field to "Yes." To select the project for synchronization and check the Reset Reference checkbox. This checkbox is only editable for those projects that have the Reset Reference Allows field set to "Yes." During synchronization, Project Gateway will automatically change the "Reset Reference Allowed" setting back to "No."

Once the selections have been made, press OK to begin processing.

Update Notes: Sequence of Processing

1. The Notes database is opened and the stored project plan is updated with the current status from the assignment documents.
2. The Project file is opened and read. For some project types, a helper application, "Project Gateway Transfer" is invoked by Project Gateway to perform the actual data transfer. It will appear briefly at the bottom of the screen on the Windows 95 Toolbar or as a minimized icon in Windows NT. It will disappear when the project information has been read.
3. If selected, the Edit Resource Selection dialog will appear to allow you to choose which resource assignments will be updated in the Notes database and to rename resources.
4. If selected, the Add Taskhelp dialog will appear to allow you to include Taskhelp on new assignments. Note: this does not allow you to change existing Taskhelp references.
5. The assignments in the Notes project are matched with those in the project file. This process is described later in this chapter.
6. If the "Confirm every synchronization" checkbox on the Setting dialog is checked, a message will appear allowing you to continue or cancel the update of the Notes database. At this

time you can, if you wish, check the contents of the Sync.Txt report file to ensure that matching was done to your liking. Several numbers appear in this dialog, they are the %of existing tasks that matched, %of existing assignments that matched, and number of existing documents requiring updated due to changes in the incoming plan. Even though the last figure may be zero, the synchronization should still be completed so that new project tasks, assignments and participants can be incorporated.

7. New Participant Profile documents will be created for resources not previously used in the database. They will be set with the default agent rules and timesheet overhead categories found in the Field Map document. New chart definitions are created if templates are found in the database. Note: The Repository Center database contains a setting, that, if enabled, will prevent you from adding new participants during synchronization. If this option is enabled, and if you plan contains a new resource or if a resource name has been changed, then a warning message will appear and the synchronization process will stop.
8. New assignment documents are created where they did not previously exist in the database and existing assignment documents are updated to show the current values of the designated data fields (according to the existing Field Map). The co-worker doclinks and dependency doclinks are recreated as specified in the new plan.
9. Whenever an existing assignment document is updated, an entry is made into the revision history field of the document and the revision date field is set to the current date. If one of the "significant" data fields is modified then the "significant revision date" field of the assignment document is also updated and a list of the fields changed is added to the revision history entry.
10. The .CPF file attachment containing the stored project model of the new plan replaces the previous version of that attachment and the project revision history field of the Project Profile form is updated with the date and file name of the revision.
11. A news item is generated if the "Create News When Updated" field of the Project Profile document is set to "Yes."

At the completion of this process all of the selected work assignments of the new plan will have corresponding documents in the database. Assignments corresponding to tasks that existed in previous versions of the plan but not in the current version will still exist in the database because they may contain valuable project information but will be displayed only in the Obsolete Assignments view as described above.

Existing Assignment and Project Profile documents are affected by synchronization. New Participant Profile, Graphics, and News documents may be created. All other documents in the database are unaffected.

Special Handling Of Actual information

When an assignment document has an actual start, finish, effort hours or percent complete value specified, those values will never be changed by synchronization. If the document does not have an actual start, and if actual values exist in the project plan, those new values will be inserted during the update process. For new assignments created during synchronization, any actual values, dates, etc. found in the plan will be placed in the database.

In other words, Update Project will never modify an actual value entered by a Notes user, but it may set actual values where none have been specified.

Note: There are several special .INI file options described in the Appendix which can be used to modify this behavior so as to allow actual costs to be imported even if there are actual cost values in the database and to override existing actuals with project plan values.

"Significant" Changes

Certain assignment fields are defined as "significant." If a change is made to any of these, the *significantrevisiondate* field of the assignment document will be set to the current date. These fields are: *plannedstart, plannedfinish, plannedeffort and workremaining, actualstart, actualfinish, actualeffort and workrate.*

Matching Assignments

Both directions of synchronization depend upon the successful completion of the "matching" process. Matching identifies exactly which assignment document in the Notes database should correspond to a particular work assignment in the project plan. Once matching is completed, you can have a high degree of confidence that the information will be transferred correctly between the project model and database.

Matching is a two phase process. First, tasks in the stored project model are correlated to tasks in the project plan. Second, for those tasks that exist in both, assignments are matched by resource name with special handling of unassigned tasks.

Matching Tasks

Tasks can be matched by codes or by name. Matching by codes is better because task names can be changed in the plan. The behavior of the code based matching process depends upon the source of the project information.

Code Matching

If the project comes from Primavera, SureTrak or Project Scheduler or Open Plan, there will always be a unique Task ID or ActID on each task. This code will always be used. If the project comes from Project Workbench, the Task ID will be used if available, the user must ensure (by setting the TaskIDValidation .INI option) that each task has a unique ID. If duplicate ID's exist, name matching will be used.

If the stored project comes from Time Line, the task may or may not have a WBS (Work Breakdown Structure) code for some or all tasks and the code may or may not be unique to the task. But if the stored task has a code, and only one task in the project plan has the same code, the tasks are considered to be equivalent.

If Microsoft Project is used, tasks may have WBS codes, but these codes may not be usable for matching purposes. The problem is that Microsoft Project automatically assigns WBS codes based upon the outline structure of the project. (i.e. the top task is 1, it's first sub task is 1.1 etc.) While this is convenient, it means that if you insert, delete or rearrange a task, some or all of the WBS codes in the project will be changed. If we imported a project on day one, and synchronized with a modified version on day two, a task whose code was 1.2.5 might now be assigned a code of 2.2.5 simply because a new task was added at the top of the project outline.

If, on the other hand, you manually enter a WBS code (say A001) into the WBS field in MS Project, that code will never be changed, no matter how the project is reorganized.

Project Gateway is programmed to ignore the default WBS codes created by MS Project. It does this by comparing the code found on the task with the code that would have been created by default using the outline numbering method. If these are the same, it ignores the code. If they are different, it assumes the user has manually entered a WBS code and that this code should be used for matching purposes.

The Microsoft Project macros provided with Project Gateway will create fixed WBS codes. These should be installed and used as described in the "Using Microsoft Project 98" or "Using Microsoft Project 2000" chapter.

If a valid code is found in the stored project, and if the same, valid code is found on only one task in the project file, the tasks are matched.

Name Matching

For any task not matched by code, the name of the task is compared to the names of tasks in the project plan. If exactly one task is found with the same name, the task is considered matched. If more than one task is found with the same name then a list of these candidates is prepared and the hierarchy of the stored project tasks is compared to the hierarchy of the new plan tasks to find that task with the best matching hierarchy.

This process is necessary because many projects use duplicated task names at the lowest level of detail. For example:

Design Part 2034

Get Specification for the back subassembly

Prepare Drawing

Review with Team B Manager

Design Part 6790

Get Specification for Axle

Prepare Drawing

Review with JLab Manager

Here there are two tasks named *Prepare Drawing* and two assignment documents in the database with the same title. In order to correctly associate the progress information, the matching system will look at the parent of the task Design Part 2034, or Design Part 6790. This process would be repeated upward through the task hierarchy until only one candidate task remains.

Clearly, having codes assigned to tasks is the most reliable way to ensure matching, especially over the life of a long project. If you do not use codes, you must be careful not to change task names during the project. Note that you can reorganize the task structure as much as needed.

If duplication cannot be resolved because the tasks have duplicate hierarchies, a final option, "Position Matching" is available. Position matching must be enabled by entering a special .INI file setting. If enabled, and if the tasks have the same task position in both stored and incoming plans, then matching will be done.

Matching Resources

After task matching is complete, the resources assigned to the tasks are matched. Resources are matched by the name used in the project plan. Therefore, you should not change the spelling of resource names in your project plan after the Notes database has been created. If you do, assignments will not match and you will be unable to synchronize. However, you can use the Edit Resource Selection dialog to specify a resource name that is used in the Notes database as an alias for that used in the project plan. For example, the project plan name might be "jc" and you might have renamed this to appear as James Conseby in the database. Since this mapping is retained by Project Gateway in the stored project attachment, the matching will occur correctly.

Reassignments

When an assignment has been reassigned since publication, matching is done using the *original* participant name. This eliminates the need to change the project plan.

Note that, in the implementation for Microsoft Project 2000, the system WILL change project resource assignments to match changes in the repository.

Primavera/SureTrak

Primavera matching allows for the possibility that the same resource may be assigned to a task several times using different accounts. To allow this, resources are first matched where the same account code exists in both the stored project and the external project. After these assignments are matched, any remaining assignments will be matched based upon resource names only.

Unassigned tasks

Several special situations occur for tasks that are or were unassigned.

1. If the task was originally unassigned and is still unassigned, then the "unassigned" assignment document in the plan will be matched to the task in the project plan. Since no work assignment exists in the project plan, only dates and percent complete will be moved during synchronization and any hours reported in the database will not appear in the project plan.
2. If the task was unassigned in the original plan, but is assigned to one resource in the current version of the plan, then the "unassigned" assignment document of the database will be matched to the assignment in the project plan. When doing Update Project, the work hours and status shown in the database will be applied to the resource assignment in the project plan. When doing Update Notes, the "unassigned" assignment document will be renamed with the resource name from the project plan.
3. If there is only one assignment document for the task in the database, and there are no assignments made to the task in the plan, then that one assignment will be matched to the plan regardless of the resource name.

Special Matching Rule (Advanced User Feature)

Generally assignments are matched only if they have the same resource name in both the stored and external projects. There are situations in which you might want to be able to change resource names without preventing the matching process. To allow this a special rule can be invoked by using the MarinPMG.INI file parameter SpecialMatching=1. If this is set and if there is just one assignment in the Notes database and just one assignment in the project plan for a particular task, the two assignments will be considered matched no matter what the resource names are. *Note that this rule only functions for tasks with a single assignment.*

Matching Failure

If few or none of the assignments in the database match with those in the project plan, the synchronize process will stop before making any changes. This is done to prevent serious errors from being made by the incorrect pairing of project files with databases.

Gross revisions of the project plan (such as changing all the WBS numbers if they have been used, or changing many resource names) will also cause matching failure and prevent synchronization. If this is the problem you have two choices of action: 1) go back to a previous version of your project plan that does match, or 2) use the Make Project File command to create a new project model from the database.

Synchronization Report

Each time the matching process is run, a text file is created called "Sync.txt" If a previous version exists, it will be replaced. This report details the progress of the matching system and shows you exactly which tasks and which assignments were matched and which were not. You can find the Sync.txt file either by using the Windows File Manager Search command or by examining the MarinPMG.INI file for the line "SyncReportFile=".

Synchronization of Previously Published Assignments

Previously published assignments that are missing in the current project plan will be added to the plan during sync update project as if they were Notes created assignments. Previous versions (pre 5.12) of the system would simply ignore these orphaned assignments and they would have to be remove manually.

This change minimizes the effects of using the wrong revision of a project plan. The side effect, however, is that you should not delete assignments from your project plan prior to doing sync update project. All deletions should be done after sync update project and before sync update notes. That will ensure that all deletions in the plan are implemented by making the repository assignments obsolete.

Differential Synchronization

Differential synchronization reduces the time in the synchronize update Notes process.

This feature is controlled by a checkbox on the Project Gateway Settings dialog labeled *Selective Update*. Selective Update is defaulted off.

Selective Update

When "Selective Update" is checked, Project Gateway will compare the retrieved data for the currently published plan with the new data provided from the project management application. A set of rules is used to determine if the Notes assignment document really needs to be updated. Only those documents requiring an update will actually be modified. When project changes are small, the update process time can be reduced 60% or more.

Selective Update always checks for changes in schedule dates and planned effort. It optionally monitors task notes, aux/text fields, linkages and the outline structure. These optional checks are defaulted on, but can be disabled using the Selective Update Rules dialog invoked by the "Rules" button on the Project Gateway Setting dialog. The system also interprets "ResetSummaryTaskActuals" and "ResetAllNotesActuals" in the MarinPMG.INI file options to force updating of affected assignments.

The system automatically reverts to doing a full update if a "Reference Reset" is done so that baseline values in all project documents are properly reset.

When a project is updated using Selective Update, the selective update rule settings used are stored with the project. When another update is done, the current and previous update rules are compared. If the new rules are more strict than those previously used, the user is prompted to decide between doing a full update or retaining previous rules settings.

Selective Update does not monitor every possible change. As a result, there are some situations in which you would not want to use this feature. If you use a modified field map to import fields such as resource cost into your assignments, a change in cost made in the project will not be recognized as requiring an update.

Points to understand

When any document is updated, all information in that document is updated, not just the "changes".

New assignments created in the project plan will always be created in Notes, assignments deleted in the project plan will always be marked obsolete in Notes. The Selective update process only affects assignments which already have documents in Notes and which will retain these same documents after synchronization.

When a task is inserted or deleted from the project plan, the outline structure of hundreds of other documents may need to be updated. If you do not use the outline views that Project Gateway normally provides, you can disable outline maintenance and make updates go faster in some cases.

If you check "Confirm every synchronization" on the Project Gateway Setting dialog, the confirm message will contain three numbers, the last of which is the number of existing documents that will be updated. At this time, you can open the Sync.txt file. At the end of the Sync.txt file you will find a section that shows the number of documents being updated for each reason (change in dates, change in outline etc.). You might be interested in this information if you were trying to adjust the rules for better performance. Note that this last value may be zero if none of the existing documents are being changed. New documents that are being created are not counted. So you should still do the update, even if the value is zero.

Differential Project Database Update

When updating Primavera and Open Plan databases, Project Gateway updates only those project tasks and assignments that have been changed or created in Notes.