

Introduction to Master Jobs

Definition of Terms

Master Job

A master job serves as the primary setup, and can be for reporting purposes to include all sub-job activity as if performed in a single large job. It may also control how T+M billings of the sub-jobs work.

Sub-Job

A sub-job is a job that is associated with a 'master job'. It allows independent tracking of activity, but can be part of the 'master job' for reporting purposes. The master job may also control how T+M billings for this job work.

Business Issues Solved

Ability to Segment the Project

The master/sub-job concept can be used when different divisions or individuals manage different parts of a large project. Cost center or job-based security can be enabled to ensure that only the appropriate groups have access to the sub-job.

Commercial Service Scenario

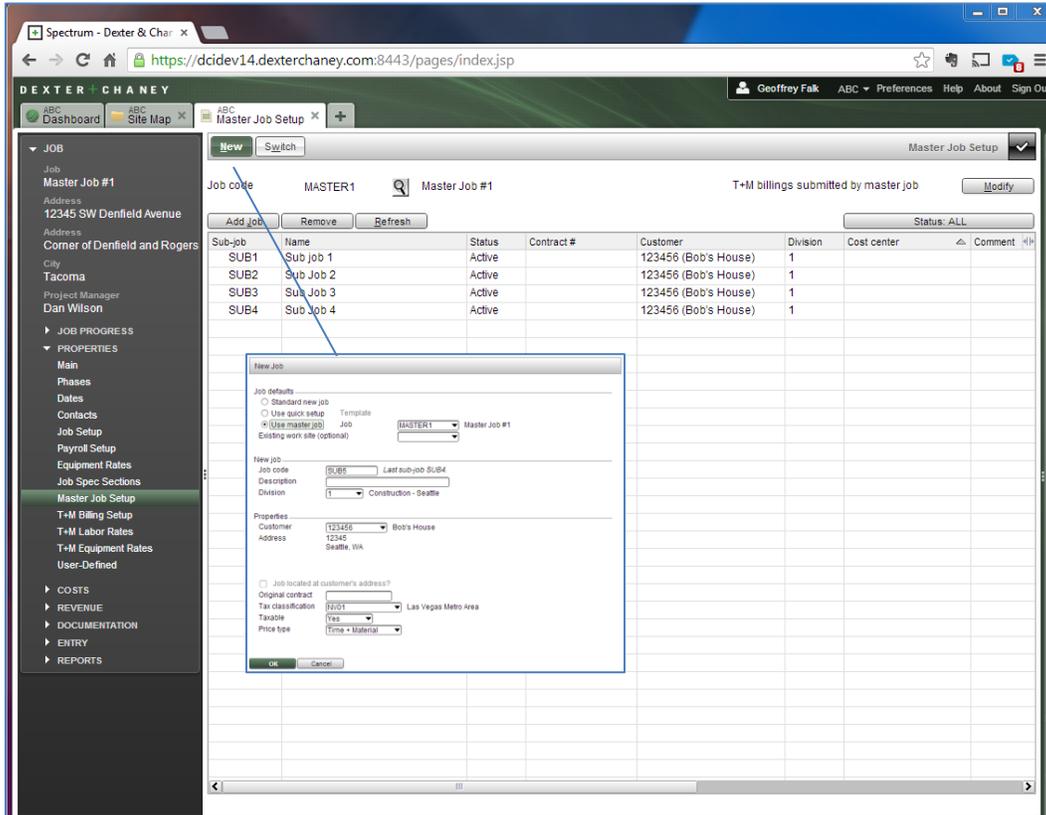
In the commercial service arena, small jobs (or work orders) are created against a master contract. The total billings of these small jobs are not to exceed a set amount, and many times only one invoice is submitted to the customer.

Master Job Rules

- A job can be a master job or a sub-job, but not both. Only one layer of master + sub-jobs is supported. This means that a sub-job cannot be a sub of another sub-job, and a master job cannot be a sub-job of another master job.
- To facilitate rolling up values, sub-jobs must use the same phase structure as the master.
- Additional job status protection is available for master and sub-jobs. The master cannot be set to 'Complete' while any of its sub-jobs are still open. Likewise, sub-jobs cannot be reopened until its master job is also reopened.
- To assist in setting up new phases on sub-jobs, the system automatically creates the phase on the sub-job when it already exists on the master job. Not only does this make setting up sub-jobs easier, reports and inquiries only have the phases actually used instead of copying the complete master job list. The status of the phase on the master job must be 'Active' or 'Inactive'.
- Sub-jobs billed out using the T+M module automatically use the master job's billing rates. (Existing rule)
- Sub-jobs use the master job's equipment charge rates defined on the Job Specific Equipment Charge Rates page.

Master Job Setup

Use the new 'Master Job Setup' page to associate sub-jobs with the master job. The Info Bar will display sub-job information in context. Click on the magnifying glass icon to redisplay the master job in the Info Bar.



New

Click to open the 'New Job' window, and the master job will default in context. The software will attempt to sequentially number the new sub-job by following the numerical pattern of any previous sub-jobs. The user can change this as needed and the software will attempt to offer a new sub-job code in the future.

'Last sub-job'	Default into field:
700-09	700-10
ABC002	ABC003
70099	70100
700-99	701-00
701-ALPHA	702-ALPHA
ABC-123XYZ	ABC-124XYZ
222ABC440	222ABC441
ALPHA	< no default >
5ABC999	< no default >
9999999999	< no default >

The 'New Job' window has been enhanced for ease of use. For clarity, we have renamed the 'Group code' field to 'Template'. When selecting quick job to create, the user will enter the 'Template' to copy from.

Add Job

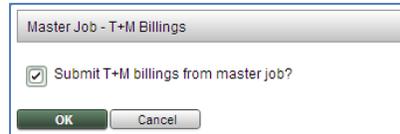
Use to associate an existing job with this master. Protection is in place to prevent an existing master or sub-job from being assigned to a new master job. The user can also manually enter the 'Master job' in the sub-job's 'Main Properties' page. The same protections exist there as well.

Remove

Removes the master job number from the selected sub-job, thus removing the master-sub relationship. The master job can also be deleted from the sub-job's 'Main Properties' page as well.

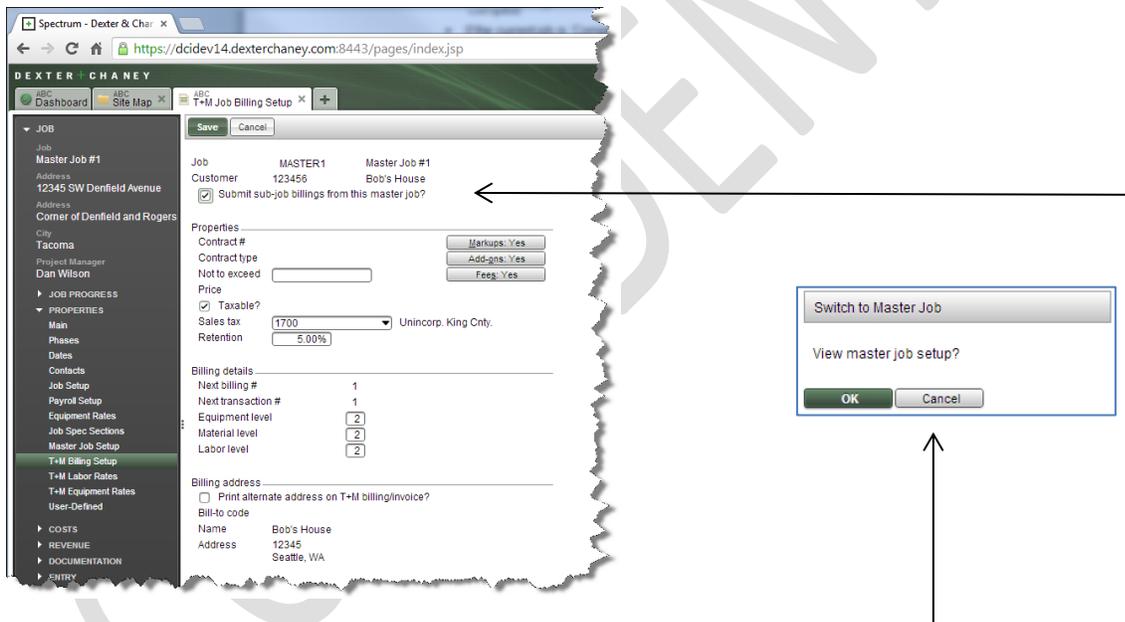
Modify

Click to select the 'Submit T+M billings from master job?' checkbox. This same checkbox is available in T+M Job Billing Setup.



T+M Job Billing Setup

As in past versions, set up the T+M or cost plus billing rules at the master job.



When a sub-job is entered on the T+M Job Billing Setup page, the user will be prompted to view the Master Job instead. No entry is allowed on the sub-job when it is billed through the master job.

Auto-create Phase in Sub-Jobs

TRAINING RULE: Do not copy all phases from the master job to the sub-job.

Instead, when the phase exists on the master job and not on the sub-job, the system will set the phase up on an as-needed basis. No disruptive messages will appear when the phase is auto-created. Note that the user does not need the ability to add new phases on the fly for this feature to work.

Rules for Auto-creation of Phases

The following rules are used to determine whether or not to auto create the phase in a sub-job.

ALL of the following must be true:

1. The job entered is a valid sub-job.
2. The 'Phase length' of the entered job matches the master job by comparing the number of Xs in the phase display code.
3. The phase + cost type already exist in the master job
4. The phase + cost type is not set to a 'Complete' status.

When all of these are true, the phase and cost type will be automatically created in the background.

- No operator security for adding phases is required.
- No warning messages will be displayed.
- The status of the new phase will set to 'Active' even when it is 'Inactive' on the master job.
- The new phase will contain all of the setup data from the master's phase, not including estimate information.

In the event that rules 1-4 are not all true, the user will receive "ERROR – Phase code entered does not exist" as in past versions.

Search Phases for Sub-job

Selected Data Entry screens will include a 'Search Phases for Sub-job' window that will include the phases not already set up on the sub-job. This window will behave like the existing 'Search Phases' window except it will compile phases from both jobs. This will allow the user to easily select a phase set up on the master job, even when it is not present on the sub-job.

Phase	Description	Cl	Cost type	Comment

The 'Phase over-budget' warning message appearing in Accounts Payable and Purchase Order will continue to read only the 'Phase + Cost type' record in the current job (i.e., never the master job). Likewise, the subcontract 'revised contract exceeded' messages appearing in Accounts Payable will continue to read only for 'billing items' on 'Phase + Cost type' records in the current job (i.e., never the master job).

Search Phases for Sub-Jobs will be available in:

- Time Card Entry
- My Time Entry
- Quantity Complete Entry
- Vendor Invoice Entry
- Invoice Approval
- Purchase Order Entry
- Job Cost Transaction Entry
- Subcontract Phase Details
- Change Request Entry
- Import Pre-Time Cards
- Import Purchase Orders

T+M Billings

New Rule

When billing from the master job, all transactions entered on the sub-job will be recorded in the T+M module as if they were charged to the master job number. A new 'From sub-job' column has been added to these records and is visible on the Modify T+M Billing screen.

This will allow the user to set a "not to exceed" amount at the master job level.

Master Job Inquiries and Reports

The majority of inquiries and reports will support master jobs. Unless otherwise stated, these are expected to be available in 14.13.

On inquiry screens and reports, entry of the master job will automatically roll up the sub-jobs information as well. Specifically, sub-job information that will be rolled into the master includes:

- Open Commitments
- Period-to-date costs
- Job-to-date costs
- Projected costs
- Estimates

Cost Center Security Rules

Summary Rule (S): When the user has security to view the master job, they are deemed to also have security to view the summary totals of all sub-jobs rolled up into the master job.

To access the sub-job, the user must have cost center security to the cost center assigned to the sub-job. (*This is the existing job rule for cost centers found in past versions.*)

Detail Rule (D): The user will only be able to access the transactions that the operator has cost center security.

Inquiries and Reports are notated with an S or D to indicate the applicable cost center rule.

Job-based Security Rules

Continue to validate the job code entered in the heading of the page to assure the operator has permission for the selected job when 'Job-based security' is enabled in Job Cost Installation. When the user has access to the master job, they are also deemed to have access to the sub-job, regardless of their job-based security settings.

Note: This is different from cost centers where there are two rules for summary and for detail.

Inquiry Screens

When a master job is entered, the 'Job code' label will change to display 'Master job' on these inquiry screens:

- Job Cost History (D, 14.12)
- Job Billing History (D)
- Contracts (D)
- Subcontracts (D)
- Job Materials (D)
- Job Contract Status (S)
- Cost Activity (S)
- Job Analysis (S)

Reports

Select the 'Combine sub-job activity into master job?' checkbox to roll sub-job activity up into the master job. In earlier versions this was labeled as 'Print master job summary?' on the Contract Status Report.

- Contract Status Report (S,14.12)
- Job Billing History Report (D)
- Job Cost History Report (D)
- Job Cost Analysis Report (S)

No Master Job Functionality Provided

The following is a list of reports and inquiries that will **not** support the new master job functionality.

Item	Reasons Not Included	Recommendation
Billing Item Analysis Inquiry and Report	These two are designed to provide contract-specific information. As billing items may be different across sub-jobs, it would not provide meaningful information.	Run multiple reports instead.
Profitability Report	There are many complex rules that must be addressed before revenue and profitability can be addressed.	Use the Contract Status Report instead.
Job Overview Report	There are many complex rules that must be addressed before revenue and profitability can be addressed.	Use the Contract Status Report instead.
Productivity Report	As different jobs may have phases with different units of measure, it would not provide meaningful information.	Run multiple reports instead.
Unit Cost Report	As different jobs may have phases with different units of measure, it would not provide meaningful information.	Run multiple reports instead.
Labor Analysis Report	This functionality is provided elsewhere.	Use the Job Cost History tree grid with the appropriate selections.
Summary Cost Report	This functionality is provided elsewhere.	Use the Job Cost History tree grid with the appropriate selections.
Payroll Hours Analysis Report	This report is intended to answer granular payroll concerns.	Recommend that the user start with the Job Cost History tree grid with appropriate selections and then use the Payroll Hours Analysis Report to drill into the specific sub-job.
Job Comparison Report	This report was designed to compare phase costs across the user's list of jobs instead of analyzing master job issues.	Use the Job Cost History tree grid with the appropriate selections.

Appendix ~ Master Job Training Information

This section is provided for training and documentation purposes, as an overview of topics that may be useful to incorporate into the Help and Training process.

Master Job Topics:

- Billing Rate Hierarchy
 - Job-specific rate for the current job
 - If not found, job-specific rate of its master job
 - If not found, standard billing rate
 - New in this project: Job-specific rate for current job will not be used if the current job is a 'sub-job billed from master'
- Markup
 - The 'Markup' flag in the phase setup must be 'selected' for any markup to be calculated from any setup source
 - Markup can be set up by Cost type, including multiple calculations for the same cost type
 - Markup can be set up by 'Labor billing code', for use primarily with 'cost-plus' billing, but also functional for 'Time + material' jobs
 - Both markup sources can be used concurrently
 - New in this project: Cost type markups for current job will not be used if the current job is a 'sub-job billed from master'
- The software will continue to allow users to assign a job its own code as the 'Master' in Job Main Properties. This has no effect in the standard software, but may be useful in certain Crystal Report writing at the client site to select all jobs under a particular 'master job', *including* the master job itself.
- Master job and sub-job are always tracked in the same company
 - When processing multi-company transactions, read for the master job and all billing rate / markup settings in that same company
- All 'sub-jobs' must be completed before closing the master. If a sub-job needs to be re-opened, the 'master job' must first be re-opened.
- Images are always stored in Document Imaging under the original sub-job, even if the T+M billing is submitted from the 'master job'.

- “Multiple layers of sub-jobs” is not supported. A job can be a ‘master’ or a ‘sub-job’, but cannot be both. It will continue to be OK to enter the current job number into the ‘Master job’ field in Job Main Properties since its presence (or absence) does not have any impact on how the software behaves. This unusual configuration may be useful for certain clients writing their own Crystal Reports relating to master jobs, but is unnecessary setup for standard operations.
- The ‘Submit sub-job billings from this master job?’ checkbox in T+M Job Billing Setup only appears if the current job is a master job *with* sub-jobs, or the checkbox has already been ‘selected’ in Master Job Setup. While it will generally remain hidden in that screen until at least one sub-job has been assigned to the job in context, the setting is conditionally offered in Master Job Setup even before the first sub-job is added. If ‘selected’ there, the checkbox will also show up here for user convenience. Otherwise, it is normally hidden since it would be confusing for users to see it on a standard job that is not a master.
- During this project, selected Data Entry screens (and import updates) have been enhanced with new ‘master job phase’ functionality to read the ‘master job’ phase list if the entered phase is not valid in the sub-job, specifically:
 - Time Card Entry window (accessed in Pre-Time Card Entry, Pre-Time Card Entry by Job, Time Card Entry, Time Card Entry by Job, Layoff Check Entry and Pre-Time Card Import Errors)
 - Employee Kiosk | My Time Entry
 - Vendor Invoice Entry
 - Invoice Approval
 - Purchase Order Entry
 - Quantity Complete Entry (accessed from Pre-Time Card Entry and the Job Cost | Data Entry menu, plus Time Card Entry and Pre-Time Card Quantity Import Errors)
 - Job Cost Transaction Entry
 - Subcontract Details
 - Change Request Entry
 - Import Purchase Orders
 - Import Pre-Time Cards

Please note that additional entry screens will be enhanced with this new ‘master job’ phase functionality in future development.

- Whereas the above list of entry screens will provide the enhanced ‘Master Phase’ functionality, all Data Entry updates that record billing transactions in Time + Material module have been included in this project. These updates will all utilize new ‘master job billing’ functionality to record billing transactions for the ‘sub-job’ on the ‘master job’ when the master job is flagged to ‘submit billings from master job’.