SPECTRUM™

CONSTRUCTION SOFTWARE

10 Critical Processes

1 **Change Orders:** Make sure you are getting all the revenue you deserve!

2 **Billing:** Improve your cash flow – avoid missed change order billings.

3 **Budgeting:** Job costing is almost useless without an accurate baseline.

4 **Committed Costs:** Know what you have already purchased and what cash is going out.

5 **Invoice Routing:** Cut overhead costs, and improve accuracy of costing.

6 **Indirect Costs:** Know the true cost of your labor and equipment.

7 **Projections:** You can not have accurate financials without accurate projections!

8 **Detailed Financials:** Know how much every part of your company is making (or losing).

9 **Business Planning:** With accurate financial and job cost data create realistic plans.

10 **Feedback:** Create feedback mechanisms to automatically keep business on track.

ROAD MAP FOR INTEGRATING OPERATIONS AND ACCOUNTING WITH SPECTRUM™

Executive Seminar Series: Managing Project Documentation with Spectrum™ Construction Software.

DEXTER + CHANEY

Information. Now.

“A document is the guardian of a man’s thoughts.” – Leonardo Da Vinci

The process of designing and building a construction project is very challenging. Between the design documents, specifications, and myriad of codes and standards, there are literally thousands of pages of documentation for even the smallest of projects.

Beyond the initial design documents, there are many more documents required to manage the construction process.

A major part of Project Management and risk management is the effective control of these documents. The Spectrum Project Management system provides some tools to help manage the process company-wide in a standardized way.

Managing Project Documentation with Spectrum™ Construction Software

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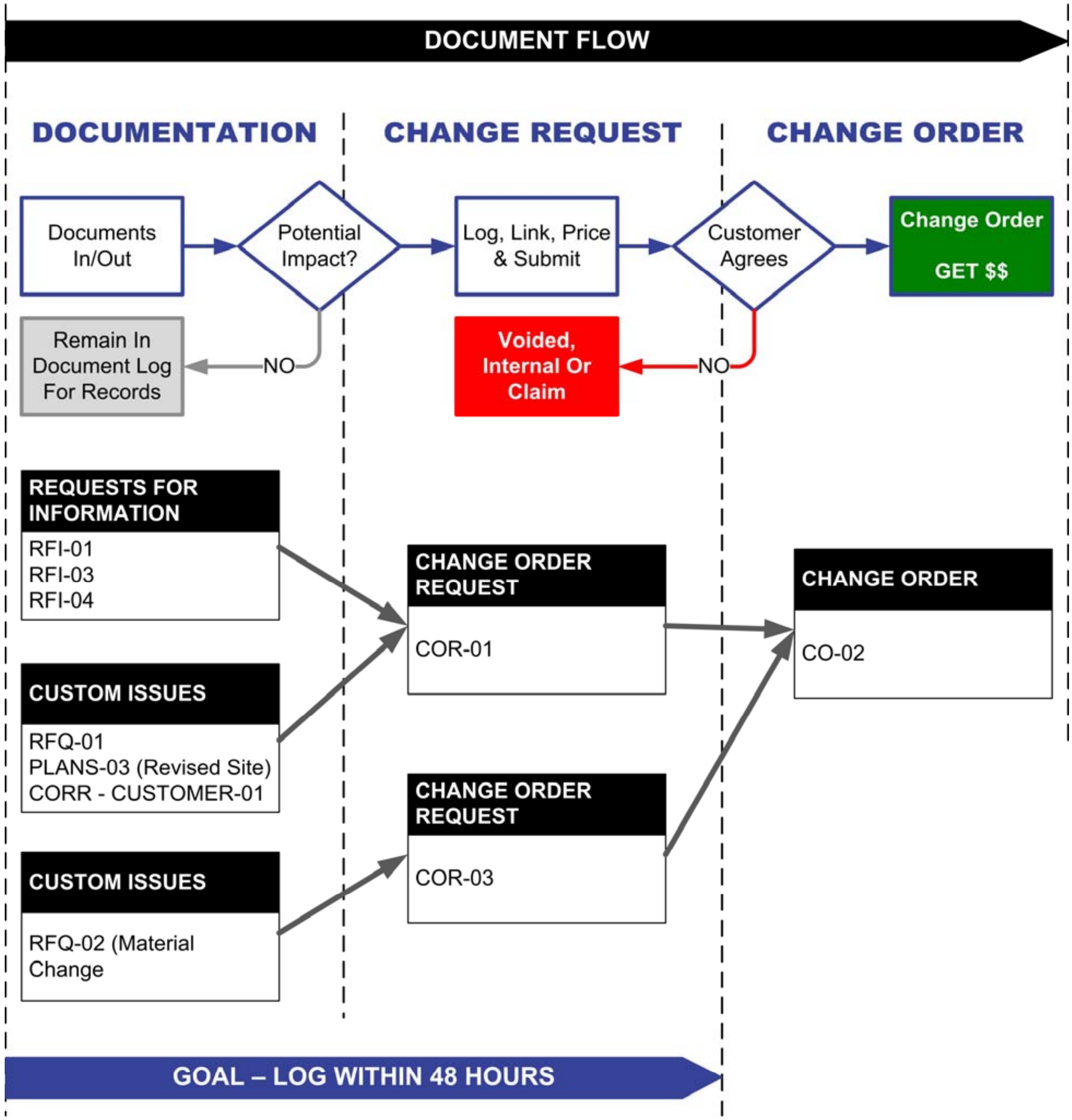
Document Management – From Inception to Completion

The diagram below shows how documentation on a project flows from inception through a contract change order. There are many alternate paths for documentation on the project besides turning into change orders, and each path is valuable.



The advantage of logging all critical documentation into a central system is that it allows management visibility so that risks can be managed effectively across the organization.

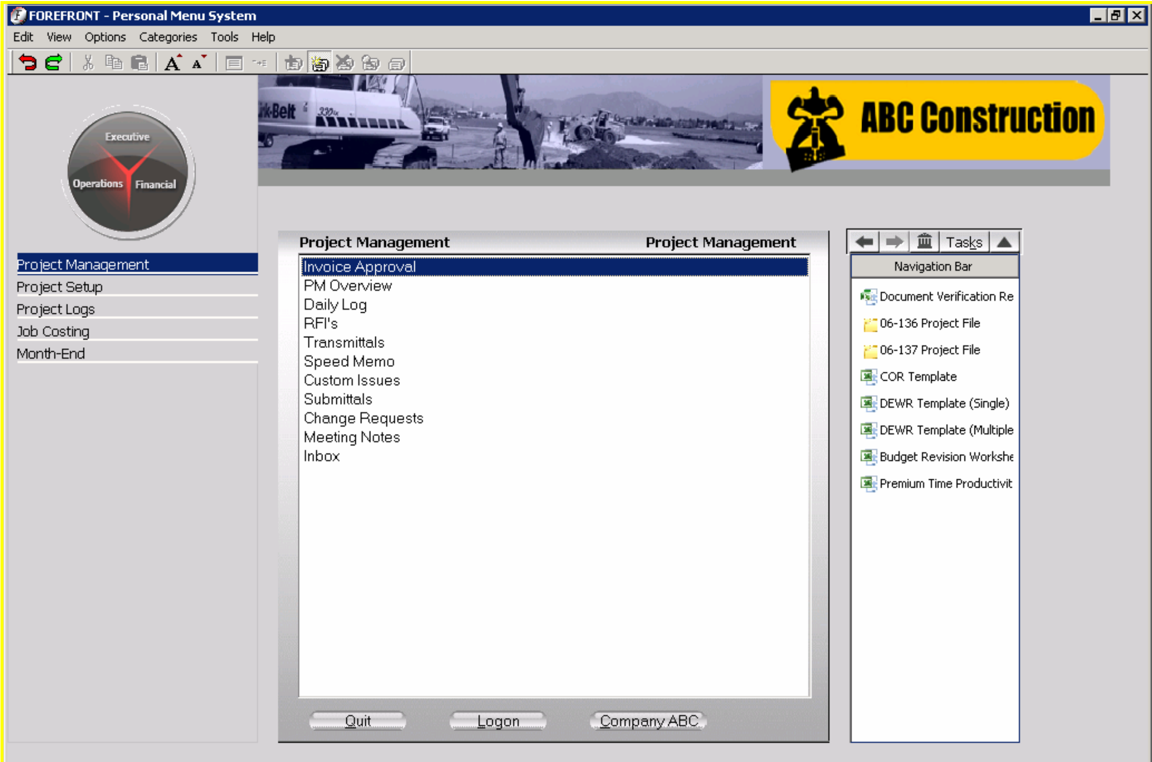
While it is nice to think that all Project Managers are created equal when it comes to documentation and risk management, that is simply not the case. Having a central document control system that is clearly documented, trainable, and verifiable, will ensure more consistency.

- ☐ Have you ever settled a claim for pennies on the dollar, or walked away all together, due to poor documentation?
- ☐ Have you ever had to give up pursuit of a change order because of poor documentation?
- ☐ Have you ever reviewed the project files near the end of the job, and realized that you have passed up potentially dozens of change orders worth many thousands of dollars?

Unfortunately, these events are all too common in the construction world. Following are some ideas to help cut down on those problems using the Spectrum system.

Spectrum Document Control

The Spectrum system provides a centralized system for creating and / or logging all critical project documentation. This is an especially powerful tool when combined with the Document Imaging features that allows for attaching or scanning of all project documents.



- ☐ **Daily Logs:** Keep track of all the daily events and delays on the project. Attach any photos or other supporting documents, such as daily action-item lists.

- ☐ **RFI's:** One of the most critical components of solid project management is the RFI and RFI log. Never spend time updating a log or filling in duplicate information again! RFI's in a centralized system are automatically logged and tracked during the creation process. A simple RFI can be created and sent out in just a couple of minutes. Responses can be logged and attached, including faxes or emails.

- ☐ **Transmittals:** Should go on every outbound piece of correspondence. Again, like RFI's, you will never have to type in repeat information again. You will be able to quickly create a transmittal document, and if it is for turnover of equipment or spare parts, you can easily scan in the confirmation of receipt.

- ☐ **Speed Memo:** Great for quick, logged correspondence that is one step more "formal" than an email or phone call, but not as formal as a letter. Great for confirming phone conversations, quick notifications of schedule items, etc. Can also be modified to work as Claim or Delay notices with standard language already inserted.

- **Custom Issues:** Simple place to log any other type of correspondence or project documentation, categorizing it appropriately. This feature will be discussed in greater detail throughout this paper.

- **Submittals:** Manage all submittals from a central location. Create automatic submittal request letters and send out past-due letters by vendor to stay on top of potential problems.

- **Meetings:** Keep track of project meetings and action items. Making sure that action items are effectively followed up on after meetings and closed-out is critical for project success.

- **Change Requests:** Many pieces of project documentation will turn into potential changes. Keep track of all project impacts within the Change Request log, including internal changes, budget revisions, claims, and change order requests (COR's / PCO's) that are submitted to the customer.

- **Inbox:** Automatically send copies of documents to other Spectrum users. Great for dispersed project team members all staying informed of what is going on. Also a great management tool so a Senior PM can overlook the work of a new PM, quickly offering suggestions and help as needed.

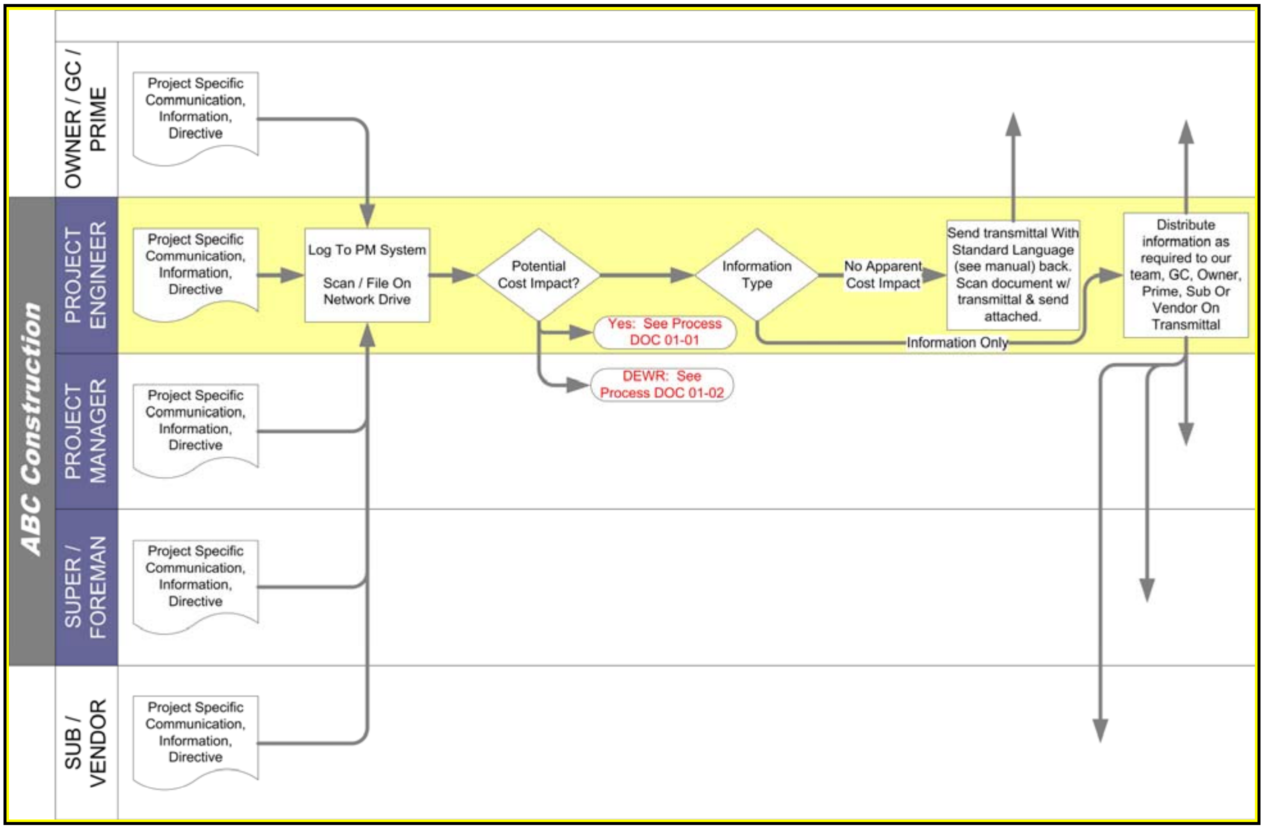
In the rest of this paper, we will focus on the use of the Spectrum system for controlling documentation and helping manage workflow. We will primarily focus on the setup and use of Custom Issues.

Document Control Workflow

The first step in implementing a strong document control process in your company has nothing to do with software, but rather with the workflow process.

- ☐ Who creates a document?
- ☐ Who is responsible for logging it?
- ☐ What happens to the document?
- ☐ How is the document flow tracked?

The flowchart below shows one version of how this happens using a Project Engineer (Assistant PM). In this workflow scenario, the Project Engineer is ultimately responsible for logging and dealing with most of the basic processes.



Using a process such as this does a couple of things. First of all, it frees the Project Manager up to focus harder on production, schedules, risk, and negotiation, while still staying on top of documentation. Secondly, and just as important, is that it teaches a Project Engineer the basics of Project Management in a structured way.

At first, the Project Engineer may only be logging documents for follow-up and action by the Project Manager at a later time. As they begin to learn more, they will then start to price out small changes or write basic letters. As time progresses, the Project Engineer will gradually take on more and more responsibility, eventually gaining enough experience to Project Manage their own project.

Setup of Custom Issues

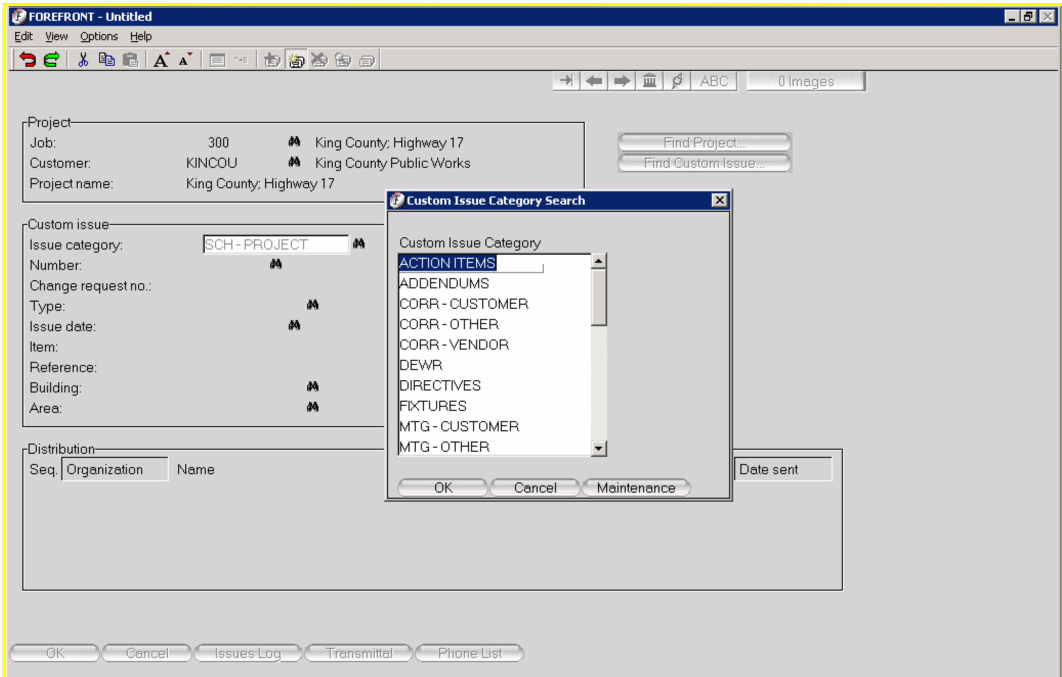
All other areas of the system are pretty easy to figure out. Custom Issues is just as simple, but requires some set up ahead of time. The easiest way to think about Custom Issues is as one big log similar to what you would normally keep in Excel.

HEADQUARTERS
555 Construction Ave.
Contractor City, CA 95555
(555) 555-5555 PHONE
(555) 555-4444 FAX

PROJECT: Large Shiny Building
LOG BY: Sam Jones

DOCUMENT LOG
ABC Construction

DOCUMENT TYPE	NUM	DATE	STATUS	FROM	TO	DESCRIPTION	CHANGE REQUEST	RELATED DOCUMENTS
CORR - CUST	1	12/05/05	ACTION	GCC	ABC	Notice to proceed		
CORR - CUST	2	12/07/05	ACTION	GCC	ABC	Request to review project schedule		
CORR - CUST	3	12/07/05	ACTION	GCC	ABC	Request for safety plan		
CORR - CUST	4	12/08/05	ACTION	GCC	ABC	Request for submittals		
FIELD INSTRUCT	7	12/09/05	ACTION	BBI	GCC	Value-Engineering Of Lighting	1	RFP-03
RFP	3	12/10/05	ACTION	GCC	ABC	Value-Engineering Of Lighting	1	FI-07
CORR - SUB	1	12/10/05	COMPLETE	SIT	ABC	Progress Billing Schedule		
CORR - SUB	2	12/11/05	COMPLETE	SIT	ABC	Request For Project Schedule		
MEETING	1	12/12/05	INFO ONLY	GCC	ABC	Notes from project meeting		



Custom Issue Categories

These should be set up one-time for the entire company, and everyone should organize their logs the same way. The categories should be chosen to cover a variety of projects, for instance, each customer and agency has different terminology for a document directing you to do work, including Field Instruction (FI), Construction Change Directive (CCD), etc. but generally, these can all be grouped together in a category called 'DIRECTIVES,' so that cross-company reports will pull up all similar documents across the company. The list below is something that could be used as a starting point.

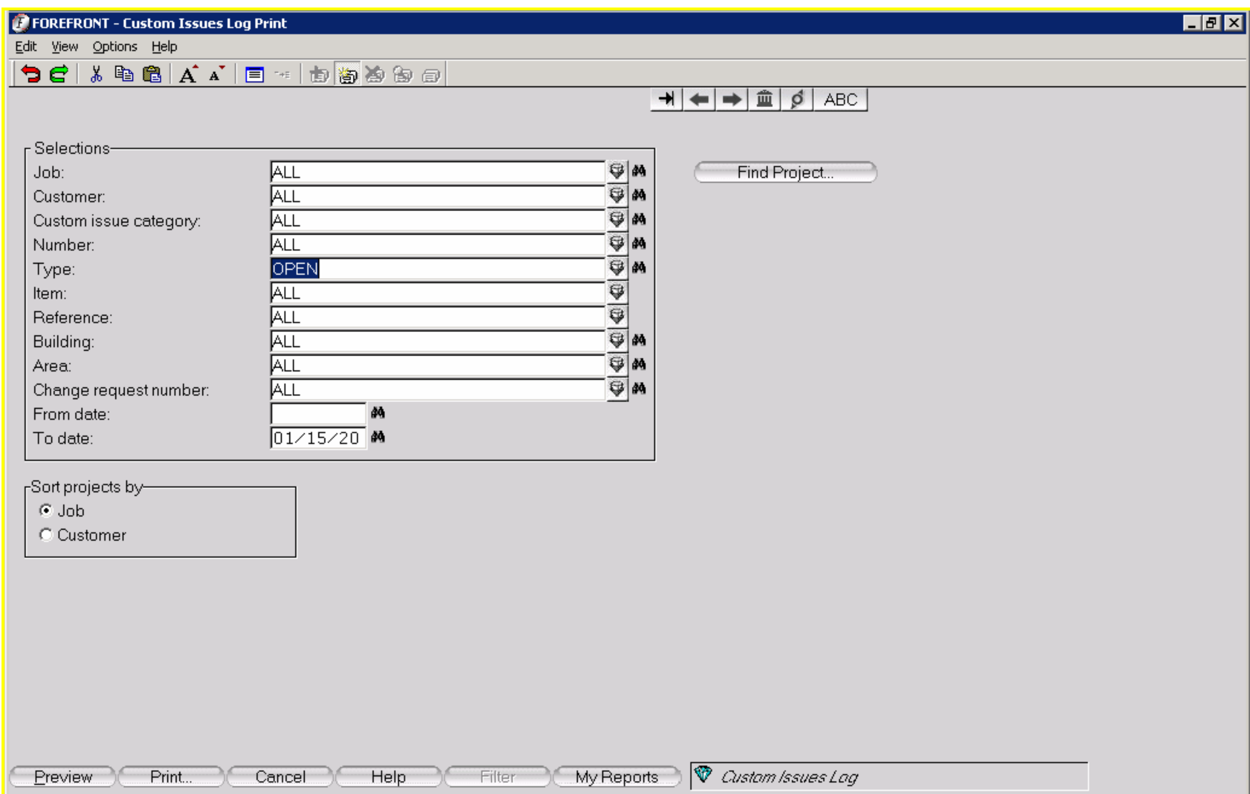
CATEGORIES	DESCRIPTION
ACTION ITEMS	Tracking of Project Action Item lists
ADDENDUMS	All project addendums
CORR - CUSTOMER	All correspondence with customer
CORR - OTHER	All other correspondence
CORR - VENDOR	All vendor / sub correspondence
DEWR	Daily Extra Work Reports - easy to tie to Changes
DIRECTIVES	Any directives - field or other
FIXTURES	Light Fixture Tracking
MTG - CUSTOMER	All meetings with customers
MTG - OTHER	Any other meetings
PLANS	Logging of plans
SK DRAWINGS	Logging of SK drawings
PUNCH LISTS	Log punch lists, OPEN / COMPLETED
RFQ	Request for quotation
SCH - 3 WEEK	Scan / log 3-week project schedules
SCH - PROJECT	Log / attach all project CPM schedule updates
SFTY - INCIDENT	Safety incident reports
SFTY - INSP	Safety inspection reports
SFTY - MEETING	Safety meetings with signatures
SPECIFICATIONS	Specifications (job-specific only)

Custom Issue Types

There is no exact way that the ‘TYPE’ field should be set up. Personally, I used this the same as the ‘STATUS’ field I use to have on my document log in Excel.

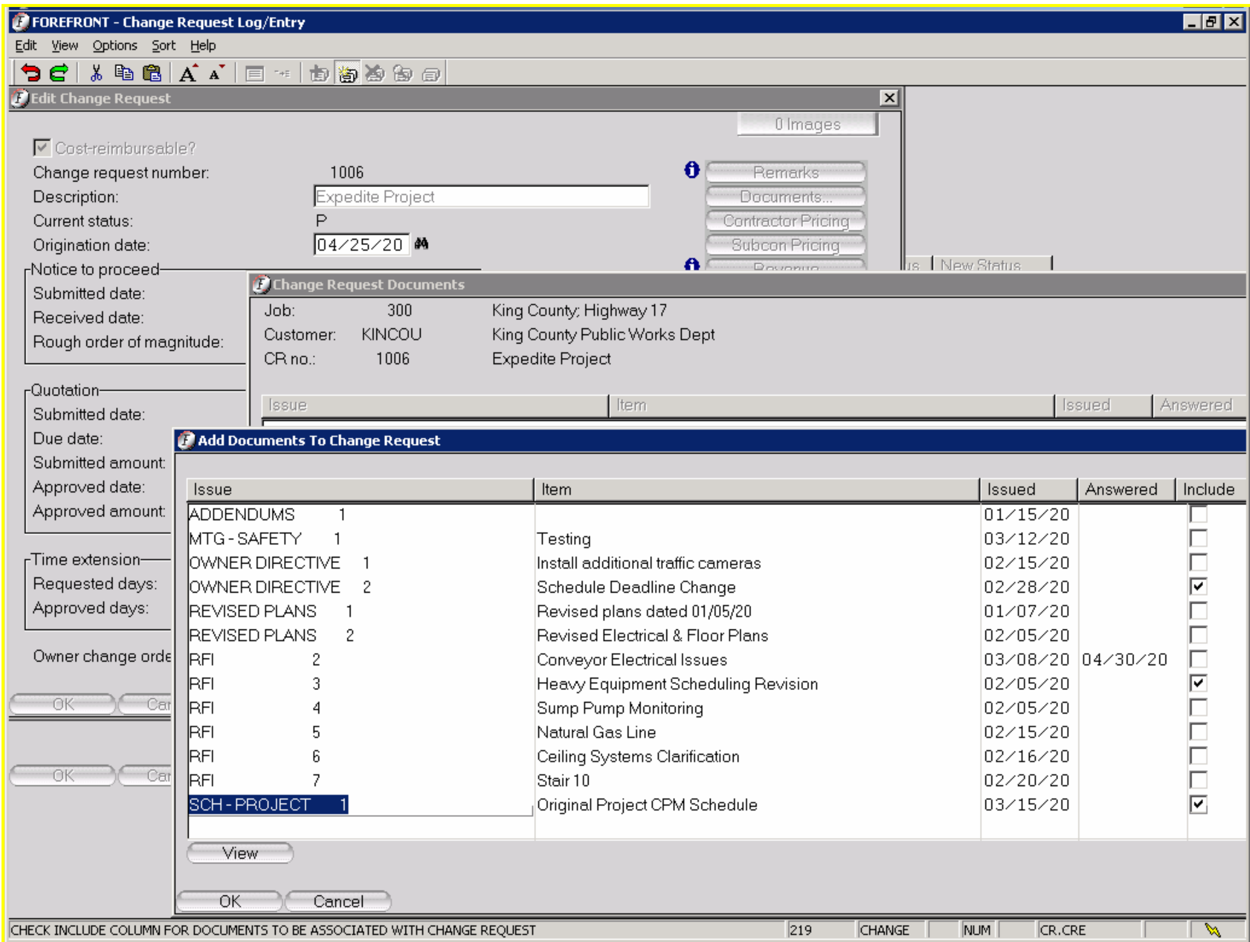
When each item is tagged, as shown below, you can run reports showing all items that are ‘OPEN’ for a given project, customer, or across the entire company.

TYPE	DESCRIPTION
OPEN	Issues still requiring some sort of action
COMPLETED	Issues that have been closed
TRACKING	Issues for tracking - such as buyout logs, counts, etc.
INFO ONLY	No action required



Linking Documents to Change Requests

Any documents logged through Custom Issues or RFI's can be attached to a Change Order Request as shown below. This makes it extremely easy to follow the flow from the financials on the Work-In-Progress schedule, all the way back to the document(s) that initiated the change or claim.



Managing Document Flow

> *"People don't do what you* ***EXPECT****; they do what you* ***INSPECT****."* – Lou Gerstner, ex-CEO of IBM

Putting a system in place is useless if you cannot monitor the progress for quality control purposes.

One of the biggest advantages of having a centralized document control process is the ability to run custom reports for specific projects, managers, or across the entire company, verifying the status of documents. This allows you to quickly spot potential problems before they become financial problems. See a typical example below.

DOCUMENT STATUS REPORT

ABC Construction

PROJECT 12345

PROJECT NAME LARGE SHINEY BUILDING

DOCUMENT TYPE	ALL DOCUMENTS			OPEN ITEMS		
	PROJECT	COR	LAST MO	1-15	16-30	31+
ACTION ITEMS	58	3	20	4	1	1
ADDENDUMS	4					
CORR - CUSTOMER	17	8	2	2		
CORR - OTHER	22		5	1	1	
CORR - VENDOR	37		6			
DEWR	59	51	18			14
DIRECTIVES	14	12	5	1	3	
FIXTURES	9	2	5			
MTG - CUSTOMER	18		4			
MTG - OTHER	9		2			
PLANS	26	6	6			
SK DRAWINGS	31	22	12	2	5	
PUNCH LISTS	5		1			
RFQ	9	9	3	2		3
SCH - 3 WEEK	18	3	4			
SCH - PROJECT	4		1			
SFTY - INCIDENT	1		1			
SFTY - INSP	6		1			
SFTY - MEETING	18		4			
SPECIFICATIONS	9					
RFI	23	14	7	4	1	1
SPEED MEMO	28		9			
TOTAL	**425**	**130**	**116**	**16**	**11**	**19**

This report shows some potential problems quickly that would not typically show up without good document control.

Why are these not priced and submitted?

Why are there so many Daily Extra Work Reports (DEWR's) on the project?

The right questions and actions today can preserve tomorrow's profits and cash flow.

Summary

Effective document control using the Spectrum document control system is relatively simple, but requires some upfront planning and training.

Send an email to david@dbrownmanagement.com, or contact your account representative, for a worksheet to help you plan out your project document control process.

For more information see the Dexter+Chaney newsletter article called "Managing Project Document Flow" at:

http://www.dexterchaney.com/project-management/newsletter/newsletter_ektid1453.aspx

Spectrum® Construction Software has a variety of modules designed to help manage projects and operations more efficiently that tie directly into the accounting system. Dexter+Chaney provides training and consulting services to help integrate these modules into your company's processes, providing a total management solution. Call your account representative for more details.

D. Brown Management provides a wide range of services to help improve Project Management processes. These range from customized training programs to specific process documentation for your company. Learn more at:

www.dbrownmanagement.com

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