Color iQC and Color iMatch
Managing Electronic Submissions Guide

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Color iQC contains many features designed to help you manage and participate in any electronic supply chain management [aka electronic submissions] program. The core of these features is known as “e-Submit” within Color iQC, and can easily integrate with the rest of your submit tools.

The e-Submit option, along with Extended Tagging, allows users to enter information which is useful for customers working with their suppliers to electronically communicate color data throughout their supply chain; this is done through a set of fields included as part of the information stored with the measurement. Usually this is done for the standard or target colors specified by the designer which needs to be reproduced in the color matching process. These "tagged" fields can be viewed in a special e-Submit View in the Quality Control mode [listed as just "Submit View" in the Change View dialog]. Information included in the tagged fields may be printed out in the form of a report or transmitted electronically in the *.CXF [or *.QTX] file format through your computer's e-mail system, ftp site, or exported into other electronic submission software. The tag data is key when recalling items from the database. Using the Dynamic Database Viewer feature the user is able to display the database contents in an infinite number of user definable hierarchies arranged in tree fashion. In fact, the tagging/organize function is useful even if you do not need to employ the e-Submit color communications features. Note that while extended tagging is an e-Submit feature, you do not have to be participating in an electronic submission program to take advantage of extended tagging features.

Most communication in the submission process currently uses e-mail attachments to pass color information between systems, although some systems are used that are internally coupled to the same database and exchange information directly. Color iQC can operate in both environments, although the e-mail format is the most straightforward and easiest to implement.

Setting up e-Submit:

In order to begin with e-Submit, you must first enable e-Submit and Tagging support. This is done from the "Settings" menu by selecting "Edit Default System Settings" when no jobs are open:

This will display the "Change System Settings" dialog box. Go to the "User Settings" tab and scroll down to the "General Workflow" section and set "Enable e-Submit and Tagging" to True.

In addition, you will have to set up the system parameters that are to be used when you are working with e-Submits. The tabs "Tag Format" and "eSubmit" allow you to set these parameters.

Under "Tag Format", the first two settings are the Format Files that you want to use to define your tag labels and choices. Any *Trial Label Format* or *Standard Label Format* files you specify here are ***system defaults*** that may be overridden by individual job or template file settings.

The Format Files that you use may come from one or more Customers, be downloaded from a web-site, or they can be created from examples included with Color iQC. The format files define what label/tag pairs you want each trial [and standard] to get when they are measured, what type of data field it is [edit box, dropdown list, multi-select], what the transfer label is, which tag group it is in, and what the possible choices for it are [if any are defined]. In addition, the position of the label/tag pair in the list is important in terms of database storage – each item is linked to a specific database column in the TAGS table, so do not change the order of the tags once determined.

Editing Format Files:

You may edit or create a new eSubmit format file from the "Settings □Tag Format" dialog box. To edit an existing file, select it from the drop-down list and click once on the <Edit this file> button below the list display field. To create a new format file, type in a new name in the list field, deleting the name displayed if necessary, and click on the <Edit this file> button. The Edit Format File dialog will open (see figure below). This dialog allows you to define the various data fields for use with the eSubmit and extended tagging functions.

Enter the first item you want into the field at the upper right titled “Displayed Label”. The field below allows you to enter in the “Transfer Label” (usually UPPER CASE). The Transfer Label is the label actually used in the QTX file to transmit the TAG information; the displayed field is what is used in your jobs and database to display and store the information. To add a NEW tag, you must click on the <new item> entry in the list before entering any information.

The Group Tab allows you to designate the TAG as belonging to one of 3 predetermined groups to help distinguish what the information is related to.

The Field Type allows you to select the type of field the item will be: an editable text field, a drop-down list of predetermined options, a multiple select list, or an editable drop-down list.

The Values box below the list will become active if you select either the Drop-down List or the Edit List option for the field. You may enter the values you wish displayed in the eSubmit field on separate lines by pressing the <Enter> key after each item.

Once you have the fields on the right side of the dialog filled in, click once on the <Add> button. The new item will be listed in the “Displayed Labels” box. The system will automatically increment the number of the field as items are added. You may change the order of the items by selecting one and using the <Up> and <Down> buttons to the left of the box.

Click <OK> to finalize the modification or create the new file.

You may have a maximum of 30 labels in each format file. The size of the label cannot exceed 20 characters, and the size of the data you enter for each label cannot exceed 120 characters. Additional submission options are available on the “eSubmit” tab. Items here include transfer format [CxF or QTX], options for how to connect to your MAPI compliant email system, and option for automatic database search and replace.

The remaining parameters are set from the “Settings □ eSubmit” tab:

The two radio buttons in the center of the dialog are mutually exclusive. You must choose whether you are using the QTX format or the CXF format for your outgoing eSubmit files. CXF is the new XML standard based on CXF3 and is currently being considered for ISO adoption as the international standard for communicating color.

Visual Comment: “Comment” mapping allows you to map comments into either the QTX “COMMENTS” field, or map to the field “COMMENT” for support of alternate systems.

Send as email attachment: Software automatically creates a MAPI text message with the QTX or CXF file attached and launches customers email client with the MAPI message:

- Use Lotus Notes sets system to use Lotus Notes style MAPI support.
- Emulate Track sets system to use DCI Track style headers and formats when sending electronic submissions by email.
- Email images sets system to automatically attach a JPG image file for each sent measurement that has an associated image. The image(s) will be automatically retrieved into a receiving iQC system’s image library.

Enable Access to Mail Client Inbox: Allows iQC to scan the users email inbox and display new incoming e-submit or Track messages:

- Automatic extraction of incoming submits. – If checked, performs an automatic scan of the users inbox every 5 minutes and moves new submits into the specified incoming submits folder.

When importing, search database for matching standard: When a submit file (QTX or CXF) is opened, iQC can recall the local matching standard from its own database and replace the standard(s) in the incoming submit. This maintains trial associations with the local standard and confirms that the correct standard was sent with the submission:

- Keep replaced standard in job – allows any replaced standard to be kept for review, or deleted automatically.

Incoming FTP site: Color iQC can optionally monitor and retrieve e-Submits through a shared FTP site.

External Send program: Color iQC can optionally launch a program or command file to handle the e-submit file (QTX or CXF) that was created. The name of the created file will be included as a parameter on the command line.

The supplier accreditation number: Required for submissions to some specifiers, if you have one you should enter it here for automatic inclusion in the submission. This is a system setting that can be overridden by the specific FMT file being used.

Sender Name: If ftp transfer is being used to send e-submits, enter a name here to tag the ftp file with the name of the sender.

Using Format Files:

Each time you open a job, the job reads in the definitions of the format files for standards and for trials. If the format file is specified in the job settings [including settings file or template], then it is used – otherwise the system specified default format files will be used. Each time a measurement is created, it acquires the labels from the current format file [either standard or trial – whichever is appropriate]. From that point on, regardless of what format file is used, that measurement already contains the labels it was given “at birth”. This makes it possible to work with and display trials from a variety of sources within the same job. Changing labels in a measurement after creation can be done from within the Submit View.

To define a format file to be used for a particular job or settings file, first open the job and from the “Settings” icon select the “Tag Format” tab. This brings up a dialog similar to the one shown earlier, but in this case there are additional options to select tag format files that ONLY apply to this job.

If the format file fields are left blank, it indicates this job will use the default system format files you specified earlier.

In the e-mail submission process, the action of submitting from a supplier to a customer uses the email address associated with the CUSTOMER_EMAIL tag in the Standard. When a customer reply’s to a Submit, they are using the SUPPLIER_EMAIL field in the submit [trial] being sent. If no email addresses are found, then the user will be prompted for an email address before sending.

Submit View:

The submit view is available as a view from within the QC frame in a job. It is designed to let you work with Standards and Trials while viewing and modifying their tag data, and perform actions related to submitting and approving samples.

The Submit view works with all the measurements currently “shown in views”. The Submit view can show tag information for the current standard and each trial that is currently enabled. Select the item shown in the Submit view by using the combo selector at the top left. The combo selector also indicates the current status of each trial using icons for “Submitted”, “Rejected”, “Commented”, and “Approved”.

Tags can be divided into categories. Click on the appropriate TAB to view/edit tag information related to that category. The names of these tabs can be modified by the user using the Format File editor. You may move from field to field using the arrow keys or TAB key on your keyboard. To activate a field for editing, it may be necessary to click the <Enter> key. How you edit each field depends on the type of field it is. After you edit the field be sure to press <Enter> or click on another field. If you do not press <Enter> the arrow keys will not work as navigational keys.
The **Text Edit** type of field simply allows you to click within the field and place a text cursor into the field. Enter the desired text and then select the next field.

The **Drop List** type of field will open the list when you double-click it. Each item will be displayed; scroll through the list and double-click your selection.

The **Edit List** type of field opens that item’s Properties… dialog box where you may enter in your data directly into the submit fields for that item.

The **Multi Select** type of field allows you to choose multiple items from a checkbox list of choices defined in the FMT file and includes your choices in the Tag separated by commas.

The **Date Field** allows you to enter a date in any valid format, and double clicking on the arrow launches a date time picker calendar control for easier entry.

The **AutoAssign** field type allows the user to define and maintain multiple “auto-increment” fields in the database to support fields (like LD numbers) which automatically increment to the next numerical value.

The easiest way to enter trial information is fill out the Submit fields for the standard prior to measuring the samples (appropriate information from matching display labels are automatically copied to the trial during measurement), or by using the right click menu “Copy Tags from Standard to Trials”. There are other menu items available which allow you to perform similar actions, including resetting the labels to the current format file, clearing all data, and copying data from the current measurement to other measurements [of the same type].

The buttons on the submit view control panel allow you to mark each item as Submitted (arrow/check), not done (blue curved arrow), accept (green checkmark), rejected (red X), and commented (yellow question mark) once a determination has been made regarding that item's disposition. Marking a submit status with anything other than "Not Done" will cause that item to be included and sent in the Submission process. To prevent an item from being sent, either mark it "Not Done", remove it from views, or use the menu item "Do not submit this item".

The Visual comment field to the right top of the view allows simple text entry in multiple lines of information. Please note that some software packages cannot accept more than 30 characters in the comment field, so when submitting comments it may be necessary to limit the size of the information sent. To the left of this field is a button that allows entry of predefined comments as contained in the current FMT file.

- - copy tag data from current measurement to all other trials shown in view.
- - change status of current measurement to Submitted.
  - make a new standard from this approved trial.
- - change status of current measurement to Not Done.
- - change status of current measurement to Approved.
- - change status of current measurement to Rejected.
- - change status of current measurement to Commented.
  - show associated image.

The dropdown control at the top left of the control panel is used to select the current measurement as well as to review the status of all the current items:

Sending e-Submits:

The main toolbar in Color iQC contains a button for "e-Submit Selected items". If this button is pressed **while the Submit View has focus**, then it will create a QTX file containing the standard and the shown in views items that have a status of Submitted, Approved, or Rejected, and save it to the designated QTX location.

If the user has a MAPI compliant email system [ex: Outlook, Outlook express, Lotus with MAPI option], and has selected “e-mail as an attachment” in their e-Submit settings, the software will automatically create an email message, determine whether the desired action is to send to customer or send to supplier, place the appropriate email address in the “send-to” box of the mail message, place appropriate information in the subject line, include information in the message body related to the items being sent, and attach the proper QTX file to the mail message as an attachment. The determination of the action to be taken is based on what status button was last clicked in the Submit View - if the user clicks on “Approved”, “Rejected”, or “Commented”, the action is to send the response to the ***Supplier*** using the email address for Supplier in the first **Submit**. If the user last clicked on “Submitted”, then the action is to send the Submission to the ***Customer*** using the Customer email address specified in the **Standard**.

If MAPI compliant software is not being used, or the user needs to manually direct the submission for other reasons, then the QTX file is created and placed in the outgoing Mailbox folder.

If the user needs to specifically select items to be submitted from the tree view, then the QC Tree View will have focus, and the behavior of the “send e-Submit button” in the main toolbar will be slightly different, instead sending the items **selected** in the tree view regardless of their submit status.

Step-by-Step: Sending an e-Submit file via e-mail

1. Make sure that the Submit View is active and that the Submit view fields for the standard and each target have been properly filled out.

2. Select each trial to be submitted by changing its status to “submitted” from the Submit View. You can use the leftmost button to copy the status to all other measurements if you need to submit all items.

3. Once the desired items are selected, click on the "Send To" control in the Submit View. You may select “send to customer”, “send to supplier”, “send to mill” to automatically send to the appropriate email address [as specified in the current standard]. You may also select “Send To:” and choose the recipient from your Outlook Contacts later.

4. A dialog box will appear prompting you to name the file. The default behavior is preset depending on your settings - However, you may alter that to any file name that you wish.

5. Once you have name the file, the system will automatically open your e-mail utility, create a new e-mail, and attach the file you just created.

6. Address the e-mail if not already addressed and click <Send>.

Receiving e-Submits:

"Import e-Submit file" button, or double click directly on the QTX or CXF attachment in the email message. If prompted for an “Import Template”, choose the proper template (.jt5) to use to import this type of QTX file. The import templates must be configured by you to specify the appropriate views for the new job you are creating, and most importantly, which FORMAT files are to be used for mapping the TAG data from the QTX file into your TAG fields. If importing a QTX attachment, the system checks for a template called qtx.jt5 in your shared system settings folder…. If not found than the system will prompt you for the template to use. Similar behavior exists for all import file types (QTX, CXF, MIF, EXP).

Organizing the Submit Process:

The e-Submit process can involve a large amount of data consisting of Standards and associated trials for a variety of colors, products, seasons, customers, and suppliers. While e-Submit is primarily a job based function, it is obviously important to maintain this data in a database capable of organizing and analyzing the state of the submit process. Color iQC contains two features designed to assist you with this process.

The function “*Recall from Database by Tags*” [available from the <Data> menu] allows the user to recall trials and standards from the database using up to 4 tag filters, Date Range, and submit status. The 4 tags can be selected from any of the currently defined tag labels, are persistent from last usage, and can be changed at anytime. The qualifier allows the user to specify the value as either “contains”, “begins with”, “equals”, or “not contains”.

The date range allows the user to specify data added to the database within the last day, 2 days, week, month, or year. Submit status can filter submits that are submitted, accepted, rejected, commented, or still open [not done].

The potential matches are then displayed in a tree view, organized by the specified tags. The user can then select the specific data to be retrieved from the database into the job to be worked on. The user can click on a single item folder to recall everything within that branch, including trials and associated standards, into the job to be worked on. A print report button allows the tree view to be printed on the printer, giving the user a way of creating a database contents report organized by any 4 tags that they choose.

The function “*Store to DB and Clear Job*” [available from the <Data> menu] will automatically return all the data from the job into the database [updating existing measurements and adding any new measurements], then delete the standards and trials from the job [any existing substrates, colorants, and Collections will remain in the job]. This allows the user to quickly update any changes back to the database after the submission process and return the job to an empty status in preparation for the next action. This method of operation is a more “database oriented” approach than the “job based” operations normally used in color iQC. With this approach, users can have a single job always open that becomes a temporary workspace container and use only the database as their primary storage media.