



Color iQC and Color iMatch Distinguishing Concepts Guide

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- 1. Document [“Job”] Based Architecture [similar to Word]**

Jobs are containers that contain all the items a user needs to perform a specific job or function. Sending the document to another user on a different system allows communication, since all the contents, including the settings used, the views, the layouts, and the data are preserved in the job exactly the way they were on the sending system. Easy to model the user’s actual workflow in a production operation, since this type of work normally involves files and folders that contain specific objects they are working on [for example - the standard , the tolerances required, and all sample measurements to date for a lot running on a specific dye machine].
- 2. Multiple Database Storage/Retrieval**

Important information that is likely to be required in multiple jobs, or needs to be preserved for safekeeping, or organized for retrieval at a later date can be stored and retrieved from whichever database is appropriate. Both Access and SQL Server databases are supported, and users can connect different jobs to different databases as required.
- 3. Multi-user, Networkable, Terminal Server Aware, Network Licensing, Security**

Most systems today must operate within a network [both LAN and WAN] of users. Information needs to be shared and distributed while maintaining control of the data and user rights. Color iQC/iMatch contains an account management system that allows supervisory control over user rights and permissions, allows supervisors to hide controls and functions for specific users, and manages access to a global SQL Server database with Regional / Local group read and modify access.

4. Measurement

A measurement is a “container” that has multiple spectral data, user defined tags, security settings, measurement properties, procedures, and colorimetric data. Extended data [such as OL/OD, R/T, or Haze data] are all treated as a single “measurement”. Trials can be “associated” with a specific standard [by its UUID].

5. Unique GUID

Every measurement, colorant, and collection in Color iQC/iMatch is created with a unique GUID that identifies that specific object for its entire life. This allows Jobs to be circulated around the world and specific items to be “recognized” by the system as they come back. Attempting to add a “new” item to the database which is actually a “renamed” copy of the original will flag the attempt and either “update” the item in the database or create a new object with a new GUID. Each measurement contains a “signature” that validates the instrument conditions used to measure it, the type of instrument, the procedures used, and any NetProfiling and/or model transforms applied to the data.

6. Templates and Settings Files

Jobs and their contents, settings, and layouts can be derived from templates and settings files, allowing a customer to create many tailored “job types” that are preset for particular functions they routinely do. A requirement to change a tolerance for a specific customer only requires changing it in a settings file, and all relevant jobs derive that new setting.

7. Connected Views

All views are connected within a document, so actions taken in one view cause updates in all other views. Views inherit their settings from the job settings. If a user needs to select specific items by using a color space plot, while other users prefer to use a list view, and some want to use a combination - then each can operate in their most efficient manner. Having all views connected enhances the understanding of what the “job contents” are since graphic views and data views and job contents views are all displaying the same connected information - just from different aspects.

8. Multiple samples compared to a standard

Color iQC/iMatch views and reports are tailored to be able to display large numbers of samples compared to a standard, can automatically adjust views to show the appropriate samples with the current standard, but allow the user to quickly show alternate selections of any samples compared to any other measurement as a standard. The user is not “locked into” any specific relationship of samples to a specific standard.

9. Tolerances

The most difficult part of a QC system is establishing and controlling what the “tolerance” for color variation is and what it means. Graphics must be used in a way that enhances a users “impression” of the relationship of a sample to a standard, and of many samples to each other through the use of meaningful tolerances. Tolerances in Color iQC/iMatch can be automatically generated using the CMC equation, specified by the user on a specific standard, specified for a particular job, or specified for the entire system. In Color iQC/iMatch, the source of the tolerance is a hierarchy [that can be specified by the user], that allows a cascade of the tolerance source ... if the tolerance is not specified in the current standard, it is derived from the job, if not in the job, then from the default system settings, if not in the default settings, it will be calculated automatically. Color iQC/iMatch also contains methods of generating tolerances based on historical information, and can generate tolerances based on statistical control limits. Tolerances are always generated for L, a, b, c, and h information – not just L, a, b or L, c, and h. LCH is **not** a separate color space from LAB – users should be free to mix or combine color differencing within CIE Lab color space in whichever metric color difference descriptor is most effective – so displaying dL, da, db, dC, and dH values and tolerances at the same time is possible and often done.

10. Import/Export

Color iQC/iMatch can import and export a wide range of competitive file formats [EXP, QTX, MIF, SMP, XML, CxF, PAL, TXT, DAT, MDB...]. In most cases these files can be important as a “native” format by simply double clicking on the file and launching Color iQC/iMatch ... the user doesn’t have to know that the file type is a foreign file type. Communications between many types of color systems is becoming mandatory in the business world. This feature has been instrumental in capturing DataColor customers – since we can click on an email attachment with a QTX file and run it directly within Color iQC/iMatch.

11. Remote Output

Integrating information from a QC Color system into manufacturing systems often involves IT Support and special software modifications. Color iQC/iMatch contains a remote output feature that allows the user to tailor and format an output stream of any information in Color iQC/iMatch and direct it to serial ports or network file locations. This information can be sent automatically as a sample is measured,

making it ideal for automatic integration into manufacturing systems. Remote Output feature is also used for output of formulas to dispensers, allowing customers to create specific output streams for whatever dispenser they have - including the ability to export all formulas to a "text file" for import into mainframe databases.

12. Drag and Drop / Cut and Paste / Multiple documents

Users can display multiple jobs within the Color iQC/iMatch frame, and drag and drop contents between the jobs to help analyze data. Users can cut and paste information or entire measurements into an Excel spreadsheet, then paste from a spreadsheet back into Color iQC/iMatch to create new measurements.

13. Printed reports

Users can easily format a printed report style from existing views and create a report style that looks good without having to be a designer, or without simply printing out multiple views one at a time.