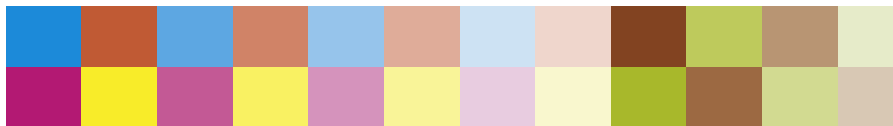COLORSOURCE INVENT

THE EASY, FAST AND RELIABLE

COLOR QUALITY CONTROL

FOR PROOF AND PRINT WORKS

OF ALL TECHNOLOGIES

YOUR WERE ALL ASKING FOR

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THE IDEAL PROCESS FOR QUALITY CONTROL
OF PRINTS AND PROOFS IN GRAPHIC INDUSTRIES*

(*) This color quality control process for Graphic Industries is a patented process fully designed and owned by Wilfrid Meffre.

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TECHNICAL FAQS:

Why a new color quality control process?

To guarantee easier and more reliable
color quality control of all printing technologies:

Controlling the quality of all sorts of digital prints using non standardized inks or media imposed the invention of a new process. A digital printer is not always used to simulate the colors of a traditional printing press, but we need to control its print quality.

Traditional print technologies such as flexography, and more generally all traditional presses used with special inks or supports also required such a new process.

To solve the persistent problem
of color proofs control by their Producers and Users:

Only a double control by the Producer and User, as done for any other industrial process, makes it possible to optimize production flows. The new process makes any User able to control if a digital proof is conform to its specifications, even if he has no specific expertise.

The accurate and universal color management methods proposed by I.C.C., the falling price of measuring instruments and associated software, the proliferation of excellent PostScript Rips properly using I.C.C. profiles, and the growing number of excellent print engines, are such that we should no longer hear about any "color proofing problems" since many years.

But the main pending problem was controlling all these color proofs. Print houses are still obliged today to carry out many in-house proofs, by not being made able to control by a bullet-proof process most of the proofs they receive.

On which principles does this new control process rest?

It is based on the study of real problems met by each Actor of Graphic Industries, without forgetting the Clients, who are not always color printing specialists but must be allowed to control the quality of what they buy.

This study takes into account:

➢ The increased flexibility made necessary by the multiplication of print technologies and by the multiplication of good digital proofing solutions.

➢ The benefits brought by modern color management tools, which authorize today a free choice of inks and media for producing high quality prints using a broad variety of print technologies.

➢ All possible workflows organization from prepress to Print Houses, as well as the application dependant desirable contractual relations between the various parties.

This study is based on a broad experience of problems met in the field by Colorsource Customers, who are Publishing Companies, Packaging Companies, Repro Houses, traditional and digital Print Houses, Copy shops, Photographic Labs, Print Works Managers, Print Clients, and I am sure I forget many. Thanks to them.

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From this study result the following principles:

Concerning the final print control:

Digital prints, made for example by ink jet or by xerography, are using media, process colors and print density curves which are not normalized, nor can be normalized due to the profusion of available consumable, software drivers and print engines.

In above conditions, the reference values attached to any control bar on any digital print can only be established in practice by the qualified Producer of this print.
But even before establishing the reference values of a control bar, it is often the control bar itself which can only be designed and optimized by the qualified print Producer.

It is only possible to standardize chromatic responses and associated control bars for a very limited number of print processes and on a very limited number of media.

The ISO standardization of major CMYK commercial print works is an excellent tool because it provides us realistic views about average obtainable density and color gamuts of traditional print works.

But such standardization requires standardizing process inks and papers as well, so that it will remain impossible to describe all traditional print processes by generic colorimetric and/or densitometric values. For example offset printing on some white paperboards may lead to gray balances very different from usual ISO CMY gray values.

Concerning digital proofs control:

If we only stick to digital proofs simulating one of the major ISO print processes such as "offset ISOCoated", it is not possible to fix once and for all the reference densities to be measured on digital proofs.
Indeed the control densities to be measured on a "good proof" depend on the print technology, inks and media and inks density curves, which are chosen or imposed by the software driver. And this is true whether control bars are printed in "Proofer print engine process inks%" or in "press color simulation", because "same color" does not mean "same density".

So that for any CMYK control bar, a densitometric control of a digital proof requires using reference densities which can only be determined and communicated by the qualified Producer of this proof.

The CMYK "Fogra Media Wedge2" control bar tries to circumvent this problem by proposing the colorimetric control of a unique control bar defined by a set of CMYK values. The reference colors to be controlled on the digital proof then only depend on the ISO print process simulated by this proof.

This no longer densitometric, but colorimetric control is allowed to all Users thanks to the important price drop of spectro colorimeters. And it can be carried out for free, for example by using Eye-One Pro spectrophotometer with the excellent GretagMacbeth (now "New X-Rite") MeasureTool software working without a dongle for this purpose.

However, this Fogra control system for ISO CMYK proofs, which I highly recommend waiting for better days, shows important limitations:

First, it assumes the best proof is a proof with C.I.E. Lab D50 colors closest match to the final print, when actually the best proof is the one which ensures the nearest color appearance.
C.I.E. Lab measurement system is far from taking into account all appearance effects affecting our vision. The simple presence of bluing agents in print or proof paper leads the qualified Producer to deliberately produce on his proof colors different from the print, in order to get a better visual matching.

By the way this is what smartly suggests ProfileMaker software when it detects strong optical brighteners in a paper.

Moreover the densitometric control of the proofing printer's print engine with well adapted spectral response is more effective for detection, control and correction of its drifts.

And well designed control bars should also allow easy visual detection of the proofer's print engine drifts such as gray balance drifts: For example, connected colors copiers are to date the most economic and productive solution for large volumes of digital proofs in Publishing Industries. But due to their color stability generally lower than Ink Jet, each copy need a control bar ensuring an easy detection of gray balance drifts by visual inspection in D50 light.
For best performance, any control bar for proofs colorimetric control will thus have to be supplemented with specifically designed control patches.

Conclusion about control bars design
and the determination of their reference values:

For controlling print or proofs works, it is clear that:

- The qualified Producer is most of the time the only one able to determine the reference values of any control bar,

- The majority of print or proofs production processes cannot make use of standard control bars, but ask for the design of control bars specifically adapted to each printing configuration of each production machine.

- The reference colors of control bars intended for a colorimetric control of proofs cannot be fixed once and for all, in order to take into account the appearance effects. They will very usefully be supplemented with control patches allowing densitometric control of the proofer's print engine, and allowing both visual and quantitative monitoring of drifts.

More generally, the color quality control of a digital printer has no reason to be very different whether this digital printer is used to produce proofs (simulation of a press), or photographs (simulation of an original), or monitor softcopies (simulation of a monitor).

In other words, there is no reason why the quality control process of color proof would be very different from the quality control process of a color print.

How does the new control process work?

For solving pending problems, the new process consists into placing at the disposal of the qualified print or proof Producer, upon his simple request, an identifier characterizing his production machine at a given moment, in the arbitrary printing configuration which he considers to be well adapted for his production at this moment.

This identifier is then printed with the control bar this qualified Producer has selected or designed, and it indexes an Internet accessible data base which allows any User of a print or proof provided with such an identifier to measure the control bar and get a diagnosis of acceptance or rejection, according to the reference values defined by its Producer.

In addition to his Customers and Partners, the Producer is the first recipient of the new process since he can control and organize much more easily his in-house quality.
Indeed, a Company using a few printers with a broad variety of inks and media can quickly need to manage several tens or hundreds of different chromatic responses, by the simple combination of print engines, software drivers, inks and media.

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The association of an identifier to each arbitrary printing configuration of each production machine will allow the Producer to easily classify all control bars and associated reference values, and also the various colorimetric profiles, density curves, machine settings parameters, jobs etc.

The new process will allow the print or proof Producer:

- Either to choose an existing control bar, for example among the existing bars established by public or private organizations such as ISO, Fogra, Brunner, GretagMacbeth, DuPont, Agfa, Techkon or else.

- Either to automatically generate a control bar specifically designed for optimal quantitative and visual control of his arbitrary printing configuration.

- To obtain help with determination and recording of the reference values and acceptable tolerances for thus chosen or designed control bar.

So that each print and proof can now be provided by their Producer with a well designed control bar and an identifier allowing any User internal or external to his Company to check the conformity of the product to its spectral, colorimetric or densitometric references.

The data base indexed by the identifier will also be able to record all other useful technical or commercial information, reserved to the Producer or released to all Users depending on Producer's choice.

Which kind of identifier will be used?

The identifier will be an alphanumeric character strings. It will be supplemented by a bar code authorizing if needed reliable and fast reading by the Producer or the User of the print or proof.

Other encodings such as sequences of colors could be envisaged but could be tedious for monochrome or duotones.

In a longer term spectrophotometers will allow reading bar codes, which will make the color quality control even easier and faster.

Will there be enough single identifiers for everybody?

Yes but only for a few billion years.

Is this process compatible with existing published standards and control bars?

Yes of course. The new process facilitates access to information and makes existing controls more reliable, since any print or proof work produced according to one of these numerous standards can be immediately identified, and the according data found thanks to an identifier printed with the control bars.

The various existing standardized CMYK chromatic responses such as ISO for offset and gravure, can be recorded in the data base and be indexed each one by an identifier, the data base containing inter alia an optimized control bar and the reference values associated to each standardized CMYK print process.

In the same way CMYK "Fogra Media Wedge2" control bar intended for a colorimetric control of ISO proofs can be associated to several distinct identifiers, each identifier making it possible to access immediately the associated colorimetric reference values, thus eliminating existing risks of confusion.

One identifier per ISO CMYK profile is enough, and why not several identifiers per ISO CMYK profile if several print geometries are needed for a same control bar.

Is this process really universal?

The process is really universal since it also allows the quality control of any document printed in RGB mode on a simple Domestic or Office printer:

The only "densitometric calibration" these printers generally allow, is by declaring to the software driver the print resolution, the inks and paper which are used. The printer then puts "more ink" on a paper with thick coating, and "less ink" on plain paper.

This approximate density calibration not being based on measures made by the Producer, it does not allow a stable chromatic response by catching up with the print engine density drifts. But the new process allows any Producer using such a printer to communicate the reference values to be measured on an RGB defined control bar he has chosen or specifically optimized for his printing configuration.

The identifier associated to this control bar allows any User of the "RGB document" to control that the printer was in conformity with the specifications defined by the Producer, at the moment this document was printed.

If the printer derives, following for example a drift of consumable or a print head change, it belongs to the Producer to detect this drift and record the new reference values of his RGB control bar by using a new identifier. The quality aware Producer can take in account his printer's drifts, in order to obtain constant colors in spite of his printer's drifts.

Here as well, the print Producer and User are both winning, since the User can easily warn the Producer if he has not noticed his printer's drifts by not checking his control bar.

The drifts of print processes cannot always be corrected, not even sometimes by inks densities recalibration process, but the new color quality control process still allows optimizing color quality in the most reliable and fast way, and only brings new advantages to all documents Producers and Users.

Of course, all professional print processes driven by color separations according to an unspecified number of process colors, and with or without a CMYK base, can be controlled as well, thanks to this new universal color quality control process.

In addition to special tints such as Pantone, which will be better taken into account during print and proof quality control, the Packaging print processes such as the flexography and dry offset imperatively require this new control method ensuring the greatest universality and flexibility.

Even if standards remain very useful to provide us orders of magnitude of realistic press base settings easily applicable in the field, which are good to keep in mind, trying to standardize everything is impossible and not even suitable today, thanks to modern communication and color management tools which allow more freedom and flexibility.

Does this process offer more advantages to enhance quality while reducing costs and delays?

The process allows simple, fast and reliable checking of any print or proof, but it goes far beyond a simple "Pass or Fail" diagnosis. Two basic examples:

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Optimal use of good or bad color proofs by Print Houses:

The Print House receiving a proof provided with control bar and identifier immediately obtains a reliable "Pass or Fail" diagnosis:

If the proof is good, it can easily be printed, either by densitometric methods (by engraving printing forms for matching density curves of the simulated press), or either by more sophisticated methods such as simulating the proof with the printing press, the proof profile to be simulated being also indexed in the data base by the proof identifier.

If the proof is bad, the new process allows the Print House much more reactivity:

- They can quickly contact the Person responsible for this proof quality thanks to its identifier.
- They can locally produce a good monitor or paper proof since they know the press profile to be simulated thanks to the identifier.
- If the proof has been visually accepted in spite of its "out of tolerance colors", the Print House can easily print it properly, because knowing the control bar reference values and the abnormally different measured values easily allows computing the colorimetric profile of this "bad proof".

On this last point, let us underline that even excellent proofs are ALWAYS different from the ideal proof.

With the new quality control process, the inevitable differences between real and ideal proofs can always be taken into account and corrected, which will close a number of sterile debates about proof tolerances.

Optimal use
of simple Customer's "pilot prints" by Copy Shops and Service Bureaus:

Copy shops and Service Bureaus often receive RGB files provided with simple "pilot prints", which have been printed by their Customers in RGB mode on some Office or Domestic printer.

Matching the colors of these "RGB proofs" is not always easy, by fault of knowing the colorimetric profile of the color printer their Customer used.

But the new color quality control process will allow the Office and Domestic Printers Manufacturers to offer to their Customers a single identifier for each model of printer, and for each printing configuration of this printer (Inks, paper, print resolution etc).

By automated Internet connection, the printer driver will then be able to print automatically on each copy the identifier of this printing configuration and an optimized control bar.

The data base indexed by this identifier will contain a generic printer I.C.C. profile along with a generic optimized control bar and generic reference values.

The identifier on Customer "pilot print" will thus allow Copy Shops and Service Bureaus to immediately know the generic profile this print, and moreover the differences between generic and measured reference values on the control bar will allow them computing an I.C.C. profile even closer to Customer's real color printer.

This will make it easy for Print Houses, Copy Shops and Service Bureaus to match all the "RGB Proofs" of their non Professional Customers.

So this new color quality control process is much more than a reliable Pass or Fail diagnosis tool: It is the missing link for best color communication in modern Graphic Industries.

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COMMERCIAL FAQS:

How will this quality control process be available in practice?

A "Color Source" Web site will allow all print and proof Producers and Users to get all necessary software tools and data.

A downloadable program will allow Producers to easily and quickly design optimized control bars for any arbitrary configuration of any production machine at any time.

When applicable, the Producer will also be allowed to choose among control bars suggested by public or private standardization organizations.

The data base will record this control bar, its reference values and will send to the Producer the identifier associated with this print configuration. The data base will be able to also record all other useful technical and commercial information for the Producers and Users.

The qualified producer of a CMYK ISO proof wishing to take into account the color appearance effects, will also be able to use a Fogra control bar and record it with a new identifier indexing his own qualified Producer colorimetric reference values. But using specifically optimized control bar for his proofing printer configuration should be even better and easier.

A second downloadable program will allow the Producers and Users to easily control any print or proof work provided with the control bar and its identifier.

This program will also allow Users to obtain all technical and commercial data of which the Producer has authorized the diffusion outside his Company.

Is it reasonable to allow Print Houses to fix by themselves the reference values of their own control bars?

This is essential in many fields of Print Industries where the profusion of inks and media makes any standardization unrealistic and not even suitable today, like for digital printing. But this will be true as well in a mid to longer term basis, even for traditional ISO CMYK Print works, and I will explain why. The standards will remain useful to provide orders of magnitude of realistic densities and chromatic responses of main commercial printing technologies:

Today, when applicable, I recommend all Print Houses and Repro Houses to engrave their printing forms in order to match the ISO density curves according to the various CMYK ISO Print configurations.

I regularly make on-site trainings in this field and I produced Excel spreadsheets allowing optimizing the printing forms engraving curves in order to match the ISO dot gains, even for offset with stochastic screening. Moreover this subject is also developed within the framework of the 3 days expert color management training courses I regularly organize for Graphic Industries Managers.

This choice to print with ISO densities appears technically and commercially reasonable today, because the Print House thus easily harmonizes the chromatic responses of all their presses by a simple engraving work of each printing form, and they cannot be reproached anything when their densities are checked by a Customer.

On this issue the dissymmetrical shape of generic offset ISO dot gain curves is rather realistic because it results from the sum of a symmetrical curve characterizing the optical dot gain of the press and of a dissymmetrical curve characterizing the mechanical dot gain of the press.

However the ISO dot gains curves can seldom be obtained on a CMYK print without using specific engraving curves for each printing form, because ISO can only specify generic average values.

The ISO profiles have the great merit to be realistic as regard chromatic responses. I sufficiently protested for years against the single and undocumented analogue proof "CMYK cromalin" reference, and more recently in 2004 against an attempt to promote in France one more undocumented CMYK pseudo-standard for offset printing, to highly appreciate and use a broad range of ISO CMYK I.C.C. profiles, thanks to the work of ISO, Fogra, UGRA and ECI, and other good wills.

These profiles are usable by all Professionals for optimizing their color retouching, their colors separations –modifying if needed the Ink settings of published ISO profiles - They allow producing easily very good proofs on monitors and paper and quite decent prints.

Conforming a printing press to the appropriate ISO densities is often enough to get prints with a close match to the corresponding ISO proof, even without using the press I.C.C. profile, and even if the press CMYK process inks are not quite matching the ISO standards.

For example Colorsource commercial booklet was carried out and proofed as "ISOCoated", and then printed on an offset press simply matched to corresponding ISO density curves.

However, all Customers have always asked their Print House to simulate their color proofs with their presses, and not the reverse.

Under these conditions the best simulation of the proof by the printing press is obtained by transforming "Proof CMYK" into "Press C'M'Y'K'", by using the I.C.C. profile of the proof - good or bad but accepted visually -, and the I.C.C. profile of the press.

This workflow, very easily applicable for CMYK Publishing, not only ensures the best possible matching of proof colors, but also is the most productive, and authorizes upstream implementation of very productive RGB or Lab prepress workflows.

But in above conditions, making a good I.C.C. profile of a density calibrated Press does not impose this printing press to be matching ISO densities.

Print Houses will always get benefits harmonizing their presses on common target densities curves, by proper selective engraving of their printing forms, but it is neither demonstrated, nor granted, that the generic ISO target densities curves are always ideal curves!

Here again, the new quality control process gives back to Print Houses all their prerogatives, all their responsibilities and all their freedom as regards quality.

Some Print Houses will be able to propose CMYK Prints offering better color gamut than ISO, because generic average density values mean "not the best" and can level down quality.

For this reason some Print Houses using higher solid inks densities prefer to use their own "CMYK Offset Coated" profile rather than "ISOCoated".

The new control quality control process will enable all Print Houses to publish their own control bars and associated reference values and index them by an identifier allowing all Users to easily control corresponding prints and proofs.

In a first step, teaching a Print House how to match the ISO profiles and density curves is an excellent and useful exercise for present and future.

Is it reasonable to allow digital proof Producers
to fix by themselves the reference values of their own control bars?

Yes, and without any doubt.

The topic of "color proofing" has always generated many delirious assertions and a lot of fuss, and many professional proof Producers and Users regularly make the expense of them.
I naively thought 11 years ago that the introduction of new working methods based on color science would quickly nail the nozzle of deceptive information to Professionals, but there is still a lot to be done.

A good proof is not a proof having colors identical to the print, but a proof having a close visual appearance, and I will not reconsider the obvious defects of present methods.

But here is a short anthology of current weird situation:

We see today Vendors praising extremely low Delta E errors by using complementary successive iterations color calibration systems, whereas this does not guarantee the best visual match, and moreover this is generally useless, given the natural fluctuations of any Press.

Getting a very close match today is easy provided the proofing printer offers a wide enough color gamut, but it is also possible to produce good proofs with a printer showing a too limited color gamut, as long as the tints are respected, and even if some colors are slightly desaturated. If such were not the case, almost no Print House could print correctly to date, given the dispersion of CMYK process inks used in the field.

Thus as regards digital color proofing, we should not fall from absolute amateurism into some stupid low delta E race, which only testifies bad understanding of human vision, quality control and useful tolerances.

Some Vendors also promote today proofing systems not using standard I.C.C. profiles, but proprietary profiles allegedly allowing better color matching. On some of these proprietary equipments, the Producer does not have any control of produced colors, not being allowed to make these proprietary profiles by himself.

I intervened recently several times as an Audit on several brands of such equipment for… confirming the problems, and solving them sometimes only, by disconnecting their proprietary color calibration and using good I.C.C. color management software upstream.

On this issue, one of the well-known Vendors to whom I said that their system, badly calibrated for ISO CMYK gravure, would be excellent and sell better if it would use standard I.C.C. profiles, answered me:

"But Mr. Meffre, We, we are certified! And even if you could color manage our proofing system you would not be certified!" This is very funny when they are not even able to calibrate their own device and a huge drum web press run had to be trashed.

Here we are: The magic word "certified" is articulated!

But whether he is a Publisher, a Print Manager, a Press Conductor or a Client, the proof User does not care a damn whether the proof he has in hands is certified or not. He only wants a simple, fast and reliable control method enabling him to check this proof is conforming well to a certain color reference.

Any digital proofing systems "certification process" is perfectly useless as long as any proof User is given the right tools for controlling the proofs he receives!

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And moreover, any proof certification process has become unrealistic today, because there are several thousands of (RIP' S x print engines x inks x papers) combinations authorizing the production of excellent color proofs.

Under these conditions why should any "certification" privilege a few - sometimes very doubtful and expensive – printers, promoted as "Color proofing systems", and ignore the excellent proofing work any qualified Producer can carry out with so many machines since so many years, thanks to the work of ISO, Fogra, ECI which everybody can access on Internet ?

It would first be necessary that all of our "proof Certifiers" could get their independence from Vendors certified.

Color proofing systems certification is definitely like the history of this toothpaste, largely advertised to be approved by the French Dental Association, a French public dentists association… especially created to approve the aforementioned toothpaste. A good dentist does not play this game.

This even concept of "proof certification" gave place, at least in France, to many abuses of which Graphic Industries Professionals and Clients made the expense, and never solved the problems.

Any qualified proof Producer is able to self certify his proofs, and the new control process ensures all the requested transparency, since it allows any User to control these proofs safely.

A Customer must be able to trust the professionalism of his Producer, but he must also be able to help him by warning him of any detected problem, because nobody is perfect. The industrial quality assurance always relies on this double control Producer-Customer, which allows very important savings to all Partners.

When it comes to quality control, no machine or software can be certified because they can fail: we can only trust People and give them the best tools.

If a proof Producer is not able to self certify, he must get trained rather than aggravating his color proofing investments.

Here again, the new quality control process gives back to the Producer all his prerogatives, all his responsibilities and all his freedom as regards quality, and allows all of his Customers and Partners to check each proof in the most reliable way.

Will the control process be easy to use?

It will be obvious for all Users equipped with a measuring instrument, even for non specialists:

Today MeasureTool software allows fast and free control of ISO proofs with a simple Eye-One Pro for example, but it is not always easy to select the appropriate reference file, by not always knowing if the proof is simulating « ISOCoated » or "ISO LWC gravure" or something else.

The identifier will allow faster and more reliable control of ISO proofs, thanks to enhanced control bars and color reference values taking in account the appearance effects.

And this same simplicity will prevail for controlling any other kind of monochrome or color print or proof.

For Producers, the process will be far much easier and powerful than any of the previously existing systems:

Indeed, to design an optimized control bar for a simple connected color copier is easy today, but remains a manual and tedious operation which takes a lot of time, and which we do not always take care to realize for each print media, by constant lack of time.

The automated optimized control bars generation software will instantly produce the appropriate control bar by using the spectral measurements file or the I.C.C. profile characterizing the color copier in its printing configuration: This file is quite simply the print configuration characterization spectral measurement file such as produced by using "New X-Rite" MeasureTool software or software provided by the Web site.

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For traditional print works, the generated control bar will of course include in addition the specific patches allowing controlling line work, trapping and registration.

Will a Print House producing always CMYK offset prints on same coated paper, be allowed to always use the same identifier for all their print runs?

Yes of course: For example the "ISOCoated" identifier. Or their own identifier, if they simulate ISO proofs on their offset presses but they have chosen target density curves different from ISO, or if they use ISO densities but they want to use a specific control bar, or if they can print better than ISO.

However this Producer may wish to record in the data base some specific information for some print run, even if his overall offset printing configuration never changes. For example he may wish to record the Ink Keys settings specific to a recurrent print run.
In this case the Producer can use a new identifier for a print run, even if his control bar and associated reference values remain unchanged.

Will public and private organizations acting in the field of color quality be interested by this new process?

Of course yes. All good wills working for the progress of Graphic Industries should be interested by this process.
The new process will make their standardization work much more easily accessible and readily usable by all Professionals of Graphic Industries.

But the success of this industrial quality control process for the service of Graphic Industries will especially depend on the support and interest of all Graphic Industries Producers and Users, who need to produce every day high quality works with short deadlines and need to solve the problems every day in the field.

The success will depend as well on the high quality of software, services and technical information the Web site will offer to all Professionals. On this issue I already have very positive appreciations from many leading Graphic Industries Professionals.

Who will finance this new service to Graphic Industries?

A new start-up Company will be created for industrializing this color quality process.

There are many possibilities of financing the development of this project for the service of all.

Several business models are being studied now.

Ideally, the software for generating and checking control bars could be free or at a very affordable price (At least for CMYK prints without special tints and for Domestic and Office "RGB mode" printers).

Producers and Users frequently using identifiers could take a simple subscription, and occasional Users pay a "blow by blow" price.

The cost of the service should be very reasonable, and will undoubtedly be negligible compared with the generated time savings - the entire achieved superior print quality being for free.

It would also be possible to open the Web site to third party Companies wishing to propose services with their own control bars generation software, their own fine diagnosis software for print and proofs, their

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printing form engraving software, their press setting assistance software, their ink formulation software, their measuring instruments checking and twinning software, or their color management software for example.

But this with imposing of course common documented and evolutionary file formats for specifying all control bars, references measurements and recordings in the data base, this for allowing any User to control any proof or print work by using the standard and free software.

In accordance with the policy of rigorous, transparent, and independent information I always had toward Graphic Industries Professionals, this universal quality control system will remain open, documented, and for the service of all professional Producers and Users of Graphic Industries.

Moreover, as mentioned above as an application example, printers manufacturers and PostScript RIP manufacturers will be able to offer new services to their Customers.

These Vendors will be able to supplement the list of identifiers, generic control bars, generic reference values and generic I.C.C. profiles characterizing the various printing configurations of any printer, when marketing new consumable for this printer, bringing more quality to their User's while making their life easier.

Printers Manufacturers and color printing software Vendors can thus be interested to join this industrial project, and they are also welcome.

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http://www.color-source.net/en/Colorsource_news.htm

Up to date information about ISO12647-2-3-4-6-7 and G7/IDEAlliance standards:

http://www.color-source.net/en/Docs_Formation/2014_POINT_ABOUT_ISO_12647_STANDARDS.pdf

This color quality control process is a patented process, fully designed and owned by Wilfrid Meffre.

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