BUSINESS PLAN

ISO/TC 42
Photography

EXECUTIVE SUMMARY

This Business Plan for ISO/TC42 illustrates the exciting changes that are taking place in the imaging industry. The Business Plan identifies new technology and new stakeholders to be involved in standards development. Finally, the Business Plan offers solutions to problems in the administration of the Technical Committee that will insure a seamless operation without administrative bottlenecks causing unnecessary delays—several administrative issues concerned with operating a Technical Committee in a rapidly changing imaging industry.

ISO/TC42 – Photography is a Technical Committee in transition. The imaging industry has seen the sale and use of digital products surpass those of traditional silver halide products for the first time. Digital imaging products continue to grow in market share, while sales of silver halide imaging products have declined steadily over the past five years. The impact on ISO/TC42 of this transition from silver halide to digital imaging has been dramatic. There has been an emphasis on developing standards for digital imaging including those for ink jet print preservation, digital still camera specifications, colour characterization of digital still cameras and extended colour encodings for digital image storage, manipulation and interchange. While TC42 has pursued new interests, there remains a tremendous number of "legacy standards" devoted to silver halide photography.

This dichotomy between old and new technology has challenged the ISO/TC42 standards management capabilities. With the goal of maintaining legacy standards and aggressively developing standards impacting new technology, ISO/TC42 proposes to revamp the management of its standards programs in order to insure timely development in accordance with the ISO Directives.

The impact of standards on the imaging industry has been clear. Traditional silver halide photography was bolstered by a solid foundation of standards on subjects ranging from
sensitometry to dimensions to image preservation. New technology has benefited from the
development of digital imaging standards – the Picture Transfer Protocol (ISO 15740: 2005) has
been implemented by nearly all of the digital camera manufacturers and a large proportion of
peripheral device manufacturers. In addition to the impact on the stand-alone camera market,
ISO/TC42 standards have been influential in the development of high quality image capture
devices that are integrated into mobile phones. One manufacturer alone shipped nearly 6 million
camera-enabled hand sets last year proving that the industry is constantly changing.

To meet the challenges of a changing industry, ISO/TC42 must streamline its operations to
concentrate on emerging technology needs, while maintaining its catalogue of fundamental
photographic standards. ISO/TC42 must shorten the time to market for needed International
standards but must also do so within the requirements of the ISO Directives.
1 INTRODUCTION

1.1 ISO technical committees and business planning

The extension of formal business planning to ISO Technical Committees (ISO/TCs) is an important measure which forms part of a major review of business. The aim is to align the ISO work programme with expressed business environment needs and trends and to allow ISO/TCs to prioritize among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development.

1.2 International standardization and the role of ISO

The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development and adoption of International Standards: **ISO** (International Organization for Standardization) is responsible for all sectors excluding Electrotechnical, which is the responsibility of **IEC** (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of **ITU** (International Telecommunication Union).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 140 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

The principal deliverable of ISO is the **International Standard**.

An International Standard embodies the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry). ISO and its **Technical Committees** are also able to offer the ISO Technical Specification (ISO/TS), the ISO Public Available Specification (ISO/PAS) and the ISO Technical Report (ISO/TR) as solutions to market needs. These ISO products represent lower levels of consensus and have therefore not the same status as an International Standard.

ISO offers also the International Workshop Agreement (IWA) as a deliverable which aims to bridge the gap between the activities of consortia and the formal process of standardization represented by ISO and its national members. An important distinction is that the IWA is developed by ISO workshops and fora, comprising only participants with direct interest, and so it is not accorded the status of an International Standard.

2 BUSINESS ENVIRONMENT OF THE ISO/TC

2.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal and social dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this ISO/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:
The imaging industry is moving away from the centralized processing/printing model of the past 50+ years. The rise in digital solutions for image capture, printing, sharing and storage will allow more direct consumer input in the imaging process. Consumers now have more "ownership" of the imaging process like never before.

The charts below show the dramatic decrease in the number of prints made from film vs. prints from digital still capture devices. These charts also indicate the range of image solutions available to the consumer. ISO/TC42 will not only have to focus on the foundation standards (e.g., determination of speed, resolution, etc.), but will also be required need to educate the consumers on the various options available.

The development of International Standards will avoid the plethora of proprietary imaging solutions. Manufacturers, software developers and image fulfilment providers will be able to work within a standard framework while still offering unique products and services. It is important to note that regional and national standards development must be monitored so as not to erect barriers to trade.

2.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the ISO/TC:

![Sales of all Photography Film Types](chart.png)

This chart represents the sales of film projected to 2009. The trend is clearly that film is dramatically decreasing in market share.

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1) Source: Photofinishing News (www.photo-news.com)
This chart indicates the trends in sales of image capture devices. It is notable that camera phones will outsell both film and digital still cameras within the next 5 years.

This chart indicates the trend that prints from traditional silver halide cameras is on a steep decline while prints from digital imaging devices (including camera phones) is on the rise.
Where digital prints are being made is also relevant to ISO/TC42. With the increase in home printing, the consumer is becoming a major stakeholder in the standards development process. Consumer oriented standards for Print Life and Preservation are key areas of ISO/TC42 standardization.

Clearly consumer options are increasing for retail digital print fulfilment. Interface standards and image media standards are very important to consumer satisfaction. Current industry-generated standards for order processing will become International Standards as the industry matures.
Employment

There are no exact figures for employment in the imaging industry. This is because the industry encompasses a wide variety of products and services. The major components of the industry may be broken down as follows:

1. Manufacturers – Image capture devices
   1.1.1. Film
   1.1.2. Digital
      1.1.2.1. Stand-alone capture devices
      1.1.2.2. Camera phones

2. Manufacturers – Peripheral devices
   2.1.1. Photofinishing equipment
   2.1.2. Digital output equipment
   2.1.3. Digital image storage devices

3. Manufacturers – Media
   3.1.1. Silver halide film and paper
      3.1.1.1. Photochemicals in support
   3.1.2. Digital storage media
      3.1.2.1. Electronic
      3.1.2.2. Optical
      3.1.2.3. Others

4. Software Developers
   4.1.1. Operating Systems
   4.1.2. Image manipulation & Storage
   4.1.3. Other

5. Service Providers
   5.1.1. Photofinishers – silver halide
   5.1.2. Photofinishers – digital
   5.1.3. Online storage
   5.1.4. Personalized photo products
      5.1.4.1. Scrap booking
      5.1.4.2. Multimedia
      5.1.4.3. Others

6. Other

Each sector is interdependent with many companies providing both vertical and horizontal coverage.

The imaging industry is consolidating. Many traditional photographic manufacturers and service providers have left the market. New companies – most notably those from the computer and consumer electronic industries – have entered the marketplace.

ISO/TC42 Standards – Adoption and Citation

ISO/TC42 is unique in that many P-member Bodies do not adopt the standards per se; they simply use the International Standard as the accepted standard in the field. However a few TC42 P- and O-Members do go through the adoption process by creating a dual designation National/International Standard
ISO/TC42 standards are widely cited in other International Standards and International Publications. Most notably, the ISO/TC42 standards for Densitometry form the backbone of several standards in areas such as graphic arts, document management and even multimedia devices.

**Drafting Instructions**

- **Real examples of increased income and/or cost savings achieved through implementation of the ISO committee’s International Standards;**

3 **BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC**

The Programme of Work for ISO/TC42 contains standards for both emerging technology and legacy standards for silver halide technology. The major benefits of the work of ISO/TC42 are the removal of technical barriers to trade, the promotion of open markets throughout the world and the harmonisation of national or regional standards. The focus of TC42 activity is on emerging imaging technology. The TC goal is to facilitate the introduction of new imaging technology to the marketplace through standards that define, measure and specify electronic imaging. These standards are both supplier and consumer-oriented. Suppliers require common test methods for specifying products. These common specifications allow consumers to understand product capabilities between manufacturers.

4 **REPRESENTATION AND PARTICIPATION IN THE ISO/TC**

4.1 **Countries/ISO member bodies that are P and O members of the ISO committee**

4.2 **Analysis of the participation**

**P- and O-Members:**

ISO/TC42 is comprised of mainly developed countries. One potential impact participant in the People's Republic of China, whose vast market and emerging manufacturing base will have significant influence on the imaging market place over the next 5-10 years.

**Liaisons**


**Stakeholder Considerations**

With the aforementioned rise in consumer empowerment in the imaging industry, ISO/TC42 encourages its members to include consumer groups in the development of national opinions on TC42 standards. As TC42 standards become more consumer oriented, we will actively recruit representatives from users groups, professional societies to take part in our efforts. This consumer
outreach will begin as soon as we propose new work items for such things as image preservation best practices, human interface standards for devices and order fulfilment services.

**Leading participants:**

The following is a partial list of leading participants in TC42 Standards Development. These include suppliers as well as government and non-government groups.

Adobe Systems Incorporated.  
Agfa-Gevaert  
Canon  
Eastman Kodak Company  
Epson  
Felix Schoeller, GmbH  
Ferrania S.p.A  
FotoNation  
Foveon  
Fuji Photo Film  
Fuji Medical Systems  
Hewlett-Packard  
Ilford Imaging  
Intel Corporation  
KonicaMinolta  
Lexmark International  
Matsushita Electronics Corporation  
Microsoft Corporation  
Mitsubishi Electric Corporation  
National Geographic Society  
Nikon Corp.  
Olympus Optical Co. Ltd.  
Philips Consumer Electronics  
Philips Medical Systems  
Royal Library of Sweden  
Rochester Institute for Technology/Image Permanence Institute  
Sharp Corporation  
Siemens AG  
Sony Corporation  
Swiss Federal Institute of Technology  
U.S. Library of Congress  
U.S. National Archives and Records Administration  
U.S. National Institute of Standards and Technology

**5 OBJECTIVES OF THE ISO/TC AND STRATEGIES FOR THEIR ACHIEVEMENT**

**5.1 Defined objectives of the ISO/TC**

The three major goals of ISO/TC42 over the next five years are:

- Speed standards development
- Eliminate administrative bottlenecks
- Assure compliance to ISO Directives

ISO/TC42 is very concerned with time-to-market for its standards projects. TC42 shall continuously identify needed industry standards promoting the imaging industry and begin preparatory work for new project implementation.

In order to speed standards development, ISO/TC42 will eliminate administrative bottlenecks that have caused past delays in publication. Many of these bottlenecks are caused by a lack of understanding of the requirements of the ISO Directives. This lack of understanding includes adherence to the ISO timelines for project development, use of ISO forms and templates and
requirements for graphics in ISO/TC42 standards. Strategies for achieving these objectives are found in subclause 5.2. below.

5.2  **Identified strategies to achieve the ISO/TC's defined objectives**

**Strategy 1: Creation of the TC42 Administrative Working Group (TC42/AWG)**

*Discussion:* With the TC42 Plenary Meeting cycle now at approximately 1.5 – 2 years it is important to have a standing body to establish and review the goals of the Technical Committee.

*Proposed Action:*

Creation of the TC42 AWG, which will be a standing group to assess TC42's standards priorities. It will be comprised of the TC42 Chair, the TC42 Secretary, all TC42 WG Conveners and representatives of TC42 P-Members who wish to participate. The TC42 AWG will establish goals and determine what actions are necessary to achieve them. The TC42 AWG will also be tasked to establish dates, locations, and sponsors for TC42 Plenary Meetings.

In addition to its strategic role, the TC42 AWG will troubleshoot problems in standards development. The TC42 AWG will monitor the TC42 Programme of Work and track project timelines. Projects identified as being "at risk" by ISO Central Secretariat will be reviewed by the TC42 AWG to determine what must be done to get the project back on track.

**Strategy 2: Compile and Distribute Standards Development Resources**

*Discussion:* While the ISO Template and Forms have been available since 1997, implementation within ISO/TC42 has been sporadic outside of the Secretariat. In addition, there is a lack of expertise in following the ISO Directives – especially regarding the format and use of graphics within standards. By distributing these resources, ISO/TC42 seeks to eliminate administrative bottlenecks caused by incomplete or incorrect standards documents.

*Proposed Actions:*

(a) Create a Template Training Program for TC42 Conveners and Project Leaders. This training program will use tools available from ISO Central Secretariat and the ISO National Bodies to provide guidance in the use of the ISO Template and associated ISO Forms. The goal is to decentralise standards drafting to better utilise the resources of the Technical Committee. The TC Secretariat will remain the final reviewer of documents submitted to the Technical Committee or the Central Secretariat, however, document creation and maintenance will be the responsibility of the Project Leaders/Editors.

(b) Distribute ISO Resources to Conveners and Project Leaders. These shall include:

- ISO Directives, Parts 1 and 2 (and ISO Supplement)
- ISO Forms
- ISO Template
- ISO Server instructions
- ISO eServices Guide
- My ISO Job – Guidance for Delegates and Experts
- Training

(c) Identification of Resources at NP stage. ISO/TC42 has modified the ISO/NP Form to include identification of both text and graphics editors. The TC42 policy shall be that no document will
advance to the Enquiry (DIS) stage unless both the text and graphics comply with ISO requirements

(d) Creation of an Image Service: ISO Central Secretariat prefers that all graphics used in International Standards be submitted in DXF or DWG format. These are the native image formats of a proprietary graphics program – AutoCAD. Submission of texts with graphics not complying with ISO guidelines delays the processing of International Standards in its final phases. The goal is to provide a centralised service for converting graphics into the preferred ISO image format. It is anticipated that the TC42 Secretariat will maintain this image site employing either in-house or contract services.

Deliverables:

- Training document for ISO Template
- Checklist of required information/forms for each development stage
- Guidelines for graphics contained in TC42 standards
- FTP site for uploading/downloading images

Strategy 3: Creation of TC42 Standards Implementation Resources

Discussion: While many of ISO/TC42 standards are stand-alone, many others need implementation guidelines or tools. TC42/WG18 has developed tools (white papers, test target specifications, etc.) for many of its standards and the goal of the Technical Committee to expand the development of implementation guidelines and tools.

Proposed Actions:

(a) Add section to NP form to identify possible implementation resources should be developed in conjunction with the development of the International Standard.

(b) Review existing Programme of Work to determine whether additional implementation resources are available.

(c) Create means for disseminating resource information via the TC42 Web Site, ISO Central Secretariat and other means to alert standards users of availability.

6 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE ISO/TC WORK PROGRAMME

Among the factors that could negatively impact the business community acceptance of some future work from ISO/TC42 are the general world economic conditions and the financial health of the supplier segment of the industry. Several photographic and image product suppliers are in financial difficulties including bankruptcy proceedings. This economic situation directly affects the resources available to TC42 in the form of TC Leaders, WG Conveners and Project Leaders.

Personnel resources depend on funding. Companies that routinely provided experts for standards development are now unable to contribute this same level of expertise. ISO/TC42, as many other ISO Technical Committees representing a mature technology, finds itself in a position where the development of NEW technology standards may force the retirement of many legacy standards for lack of expertise.

In terms of technology issues, a key issue for ISO/TC42 is the cooperative development of standards. ISO/TC42 has established five Joint Working Groups under its administration, and participates in three others administered by other ISO, IEC and ISO/IEC Technical Committees. We feel that these cooperative efforts will maximize the use of scarce resources and provide needed technology solutions for the imaging industry.
7 STRUCTURE, CURRENT PROJECTS AND PUBLICATIONS OF THE ISO/TC

This section gives an overview of the ISO/TC’s structure, scopes of the ISO/TCs and any existing subcommittees and information on existing and planned standardization projects, publication of the ISO/TC and its subcommittees.

7.1 Structure of the ISO committee

7.2 Current projects of the ISO technical committee and its subcommittees

7.3 Publications of the ISO technical committee and its subcommittees

Reference information

Glossary of terms and abbreviations used in ISO/TC Business Plans

General information on the principles of ISO’s technical work