

Digital Data & Image Format Guidelines For School Photography and Yearbook Publication For The 2008-2009 School Year

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General Information

Introduction

The school picture industry offers a variety of products and services to students and schools. These are often used in conjunction with yearbooks and other products. A system that facilitates the easy combination of the products and services of different suppliers has a number of benefits.

Currently, individual students and schools employ photographers to take photos. Each of these image takers involves a photo lab or digital imaging firm to convert the exposed image into another format, such as prints, CD/DVDs, cards, etc. In the case of yearbooks, the publisher takes the images and converts them to a printed page, employing yet another method for image creation.

When the students and schools use more than one photographer, and the photographers and the different labs generate CD/DVDs in their own formats, it is more difficult, time consuming and costly to coordinate the data, images and publishing of yearbooks. The problem is similar to the situation that would exist if audio compact disks could not be played on every CD/DVD player. By using a standard format, a greater number of vendor choices would exist for the school and increase the level of satisfaction.

At the same time, technology is changing. Any guideline promoting a coordinated system needs flexibility for the future. The ultimate goal is to satisfy the customer - the school. It is believed that satisfaction can be increased by creating common readable files for the transmission of digital images and associated data from the school photographer to the yearbook publisher in a format that is as efficient and consistent as possible.

Audience & Scope

The following document is intended to inform the **Underclass** (K-11) School Photographer, Contract **Senior** Photographer, Photography Production Laboratory, interested Software Developers, and Yearbook Companies as to the generally accepted data and *subject* image guidelines for the exchange of data and *subject* images between photography organizations and yearbook producers. This document is NOT directly intended for the common school customer.

The scope of this document includes, and is limited to the PSPA sponsored ad-hoc committee developed technical guidelines for data and image exchange between the interested parties listed above. This document is technical in nature and does NOT intend to outline or require market implementation by any particular organization. This document is NOT intended to provide direct explanatory material to the target consumer of the final product resulting from adoption of these guidelines (the school).

Benefits

Benefits from such a system could include the following:

- By specifying a guideline to which the product should conform, the school has the means

to measure the value of what they are acquiring, and can make comparisons between suppliers. This can lead to opportunities that are more competitive for schools, permitting them to pick, choose, mix, and match among the numerous suppliers. While the format for the product is not the only element for price comparison, use of a common format makes the comparison simpler.

- Creating an easier interchangeability of images and data files between image providers and users. This can reduce the time it takes to create products, and could lead to reduced costs and improved quality and the number of product choices.
- Communication between schools, image providers and yearbook producers can be clarified and improved by reference to a common guideline.
- An assurance of a minimum level of quality and performance for the CD/DVD products.
- An easing of the decision making process for schools by the use of common terminology and comparable products.
- Removal of the school from the middleman position between photographers, photo labs and yearbook companies over the format of the CD/DVDs and the assurance of compatibility.

Drawbacks

There are no apparent drawbacks from such a system. For firms that do not currently produce CD/DVD images, there is no impact since there is no requirement to produce a CD/DVD. However, the system is simple enough to permit anyone to readily adopt it should they choose to do so.

Communication

A useful guideline will require communication and education programs directed to both the schools and the photo industry. It will be necessary to provide materials to explain the system and its benefits.

Limitations of the Guidelines

These guidelines address the *format* for the CD/DVD. The guidelines do not address many areas for technical or legal reasons. Among them are the photo capture and editing process, the photo print output, and the yearbook printing quality and features. These areas are the subject of creative and artistic differences, as well as customer choice. In addition, these guidelines do not suggest or require which of the interested persons or organizations has responsibility for collecting, recording or distributing the data. That is a matter for those interested to arrange among themselves.

DIGITAL DATA & IMAGE FORMAT GUIDELINES

The Digital Data & Image Format Guidelines strongly recommend the following:

CD/DVD Layout & Structure

- The CD should meet the ISO 9660 standard for CD format. DVD media should be *Standard Data +R* or *-R*.
- The CD/DVD session must be *closed* or the CD/DVD must be *finalized*.
- Data layout:

```
Volume Name
  INDEX.TXT
  MASTER.TXT [optional]
  README.TXT [strongly recommended]
  FOLDERx [use an arbitrary name but must be unique]
    IMAGEx [use unique names for each image]
    IMAGEx+1
    *
    *
    *
  FOLDERY
    IMAGEy
    IMAGEy+1
    .*
    .*
    .*
  etc.
```

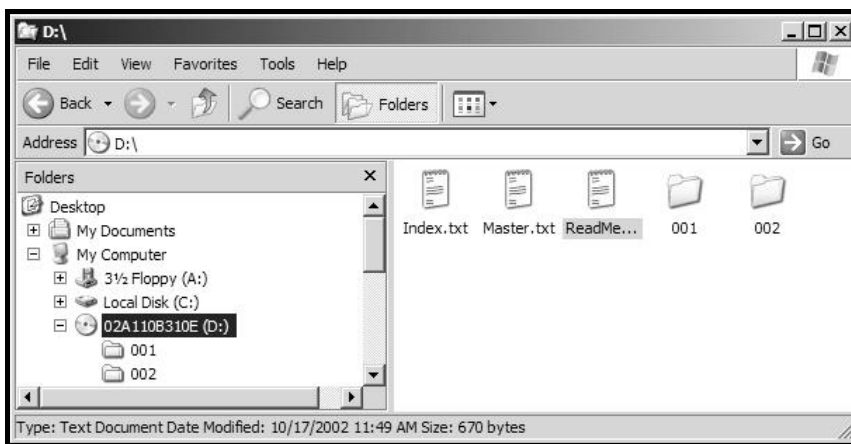
Volume Name – Volume name is an arbitrary name, but the name string must be ended with a numeric value to account for multiple CD/DVD volumes. Multiple CD volumes should have *consecutive* numbers.

.TXT Files – Text files (.TXT) are standard ASCII sequential text files and must be located directly at the CD/DVD root level.

Folder Names – Folders on the CD/DVD contain uniquely named image files. The folder name(s) must be unique using ANY naming convention (use of MS-DOS 8.3 naming convention is recommended for maximum compatibility. File names must consist of UPPER or lower case alphanumeric characters and numeric values 0-9 ONLY. No special characters allowed).

Image Names – Image file names MUST be unique for each image and should conform to MS-DOS naming conventions of 8.3. File names must consist of UPPER or lower case alphanumeric characters and numeric values 0-9 ONLY. No special characters allowed.

Screen Shot Example of Data Layout:



Data Structure

The following section defines the required and recommended text (.TXT) files and their structures:

- A standard text file is to be contained *directly under the root* of the CD/DVD.
- All volume, directory and file names should use MS-DOS 8.3 naming conventions for maximum compatibility **but is not required** (where 8 characters are for the file name and 3 characters for any extension). File names must consist of UPPER or lower case alphanumeric characters and numeric values 0-9 ONLY. No special characters allowed.
- Text files are standard ASCII format for maximum compatibility. UTF-8 format can optionally be used but should be verified with the receiver because of accented characters.
- The fields, contained within the text files, are to be **Tab delimited** (fields separated by a tab character). **Note:** Care should be taken to limit the length of the data in the included field sets. Excessively long data strings can pose issues in downstream applications.
- Line termination must be indicated by **CR-LF** (carriage return, line feed).
- The **required** file **INDEX.TXT**
- The optional, but strongly recommended, file **README.TXT**
- The optional file MASTER.TXT
- The CD/DVD *may* contain other files and folders that the CD/DVD producer thinks may be helpful to the school or yearbook producer as long as they do not interfere with the structures and requirements of these guidelines. These files are not explained, required or covered by this document and are a superset to these guidelines.

Data Content and Attributes

The following sections define the content and attributes of the required and recommended data files to be contained on the CD/DVD.

INDEX.TXT

The INDEX.TXT file is a REQUIRED file. Its purpose is to contain all the data records to be included in the published yearbook product. Part of each data record contained in the INDEX.TXT file is a reference to the associated subject image. It is this file that the yearbook

producer will use to incorporate data and associated images into the yearbook product.

Only the final records and associated images chosen to appear in the yearbook publication should be included in the INDEX.TXT file. This file should include references to images contained on all CD/DVD volumes if there is more than one CD/DVD. If other images are also on the CD/DVD, they should be **separately** identified in the MASTER.TXT file (not to be referenced in the INDEX.TXT).

Structure and Field Order

The following section defines the structure and field order for the INDEX.TXT file:

1. Volume Name
2. Image Folder
3. Image File Name
4. Grade
5. Last Name
6. First Name
7. Home room
8. Period
9. Teacher Name
10. Track
11. [Any additional defined fields].

Note: The above 10 defined, default, and reserved fields should be maintained. If the CD/DVD producer chooses to omit any of the information, then that should be identified with a **NULL VALUE** (two tabs together). Any additional fields, beyond the 10 default fields, should trail field number 10 and be identified in the README.TXT by the labels in the first record.

- The suggested, and optional, identifying file for *other* images is MASTER.TXT. This file would contain a listing of all of the images on the CD/DVD, combining those that are in the INDEX.TXT file as well as all others.

README.TXT

The README.TXT file is an OPTIONAL but STRONGLY RECOMMENDED file. The README.TXT is used to describe the content, order, special instructions, data and image source, etc. of the CD/DVD (s). It should identify *key words*, the definition of each field included, and the number of additional data fields used in the INDEX.TXT file, if any. If the README.TXT file is included on the CD/DVD, the structure and content should be as follows:

- Each keyword should be contained with bracket ([]) characters
- The bracketed keyword and the keyword value should be separated by an equal (=) sign
- Each keyword and value should appear as one line terminated by a carriage return and line feed (CR/LF)
- The structure, order and keywords should be as follows:

```
[Image Size]=  
[Color Mode]=  
[School Name] =  
[# Fields] =
```

[Field Definition #1] =
 [Field Definition #2] =
 etc.until the last field used is defined
 [Group Fields] =
 [Group By] =
 [Sort By] =
 [Lab Name] =
 [Lab Location] =
 [Lab Contact Name] =
 [Lab Contact e-mail] =
 [Lab Contact Phone] =
 [Photo Job Number] =
 [Date Created] =
 [Comments] = Copyright licensing information can be included here as well as providing
 a notice on the external label of the CD.
 [ICC] =

Readme.txt File Keyword Definitions

- **Image Size** – Keywords used to identify the size of the images contained on the CD/DVD. Allowable keywords are: **Small, Large.** **Note:** Image sizes cannot be mixed on a CD/DVD.
- **Color Mode – RGB**
- **School Name** – Keyword to indicate the information to follow will be the name of the school contained on the CD/DVD. The name of the school is simple a text string identifying the school by name.
- **# Fields** – The number of fields keywords identifies how many fields will be identified in the Index.TXT and Master.TXT files. The minimum value allowed is 10 with no maximum.
- **Field Definition #1 - ?** – The keywords for field definitions will repeat themselves, one for each included field. The content of the keyword will be the definition of the field at that position. Example for the first 2 fields:


```
[Field Definition 1] = Volume Name
[Field Definition 2] = Image Folder
```
- **Group Fields** – Keyword to indicate the allowable field set from which data grouping is allowed.
- **Group By** – Keyword to indicate the field(s), from the Group Fields allowable field set, that have been selected to group data for the publication.
- **Sort By** – Keyword to indicate the sorted order of data within the selected Group By selection.
- **Lab Name** – Keyword to indicate the information to follow is the *name* of the CD/DVD producing Lab or entity.
- **Lab Location** - Keyword to indicate the information to follow is the *location* of the CD/DVD producing Lab or entity.
- **Lab Contact Name** - Keyword to indicate the information to follow is the *name of a contact person* at the CD/DVD producing Lab or entity.
- **Lab Contact E-mail** - Keyword to indicate the information to follow is the *e-mail address* of the contact person at the CD/DVD producing Lab or entity.
- **Lab Contact Phone** - Keyword to indicate the information to follow is the *phone*

number of the CD/DVD producing Lab or entity.

- **Photo Job Number** - Keyword to indicate the information to follow is the *reference job number used* at the CD/DVD producing Lab or entity.
- **Data Created** – The date the CD/DVD was created.
- **Comments** – Additional comments intended for communication about the CD/DVD or content.
- **ICC** – ICC profile tag to indicate color profile used. Default is blank and will assume sRGB.

MASTER.TXT

The **MASTER.TXT file is an OPTIONAL file**. Its purpose is to contain all the data records associated with the school photography activity. Like the INDEX.TXT file, part of each data record contained in the MASTER.TXT file is a reference to the associated subject image.

Some photographers, schools or other customers may desire to include *multiple poses* or “proof plan” photos on the CD/DVD, even though they are *not* intended for yearbook reproduction. There is no suggestion in these guidelines that anyone should or should not provide extra images. However, if such images are provided but are not intended for inclusion in the product covered by the INDEX.TXT file, they should *not be listed within the INDEX.TXT file*. **Only the pose or image selected for inclusion in the yearbook should be identified in the file named INDEX.TXT.**

The structure and order of the MASTER.TXT file is IDENTICAL to that defined above for an INDEX.TXT file.

Multiple CDs

There may be times when the number of image files requires the use of multiple CD discs to contain all the data and images for a given school. When this situation occurs, the following guidelines should be used:

- Any folder, containing images or data, *should not be split between two CDs*. Access for a complete folder is simpler if the *entire folder* is on a single CD.
- If the CD producer wishes to use only one folder to contain subject images, then a *second unique folder should be created on each subsequent CD volume*.
- *Unique volume names* for each CD volume should be maintained

Post CD/DVD Production Modifications of Data

Some CD/DVD producers may choose to develop image and data editing applications to allow school customers to review and edit data and associated images. If such applications are used, then text files will obviously be modified from their original CD/DVD versions. When changes are made to INDEX.TXT, MASTER.TXT and/or README.TXT files, it is preferable to incorporate those changes into a new CD/DVD. However, in the absence of a new CD/DVD, then **replacement files** should be completely rewritten on a floppy disk (or other media acceptable to the parties) and provided with the CD/DVD to the yearbook producer.

Image Structure and Attributes

The following section defines the image files and their attributes:

- All image file names should be unique.
- All image file names should use MS-DOS 8.3 naming conventions for maximum compatibility **but is not required** (where 8 characters are for the file name and 3 characters for any extension). File names must consist of UPPER or lower case alphanumeric characters and numeric values 0-9 ONLY. No special characters allowed .

Image Attributes:

Image file format

- Color images
 - The *default guideline for all images* (underclass and senior) is **RGB** color. RGB color images are preferred even if the book is produced in B&W. Publisher assumes the responsibility for conversion.
 - The default, and assumed, ICC color space is **sRGB**. Any color space used other than the default must be indicated in the ReadMe.txt file in the “[ICC]=” tag.
- All RGB color image files are to be saved in **JPEG format**.
- For JPEG, use a compression ratio of **7.5:1** or less. The file format should be PC byte order. An option is to include a qualitative reference image, such as a Macbeth™ chart, gray card, or other tools that provide a reference standard, which will assist in verifying the color space and color balance applied.
- If the photographer desires to explain what has been done on the images (if anything), it can be explained in the README.TXT file. Any compression ratios, ICC Profiles and reference standards should be identified.

Image sizes

Image sizes cannot be mixed on single CD/DVD issue.

Small

- 320 X 400 pixel (.8 aspect ratio). **This file size is not recommended for printed images greater 8 picas by 10 picas (1.334 x 1.667 inches).** See Graphic Arts Technical Foundation (GATF) Guidelines.
- 300 dpi* in the image file header
- **Small** is the default for most producers unless otherwise specified.

Large

- 640 X 800 pixel (.8 aspect ratio). **This file size is not recommended for printed images greater 12 picas by 16 picas (2 x 3 inches).** See Graphic Arts Technical Foundation (GATF) Guidelines.
- 300 dpi* in the image file header

* **Note:** If there is a question about individual publisher DPI or format requirement, contact that specific publisher for their specific guideline