

Applications Specifications for Agfa APOGEE PDF RIP and PRINT DRIVE Interface



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This document describes the following topics related to the interface between AGFA APOGEE PDF RIP or PRINT DRIVE system and KODAK APPROVAL XP/XP4 systems:

- Interface specifications,
- Theory of operation,
- Exceptions and cautionary notes,
- Attachments, and
- Glossary.

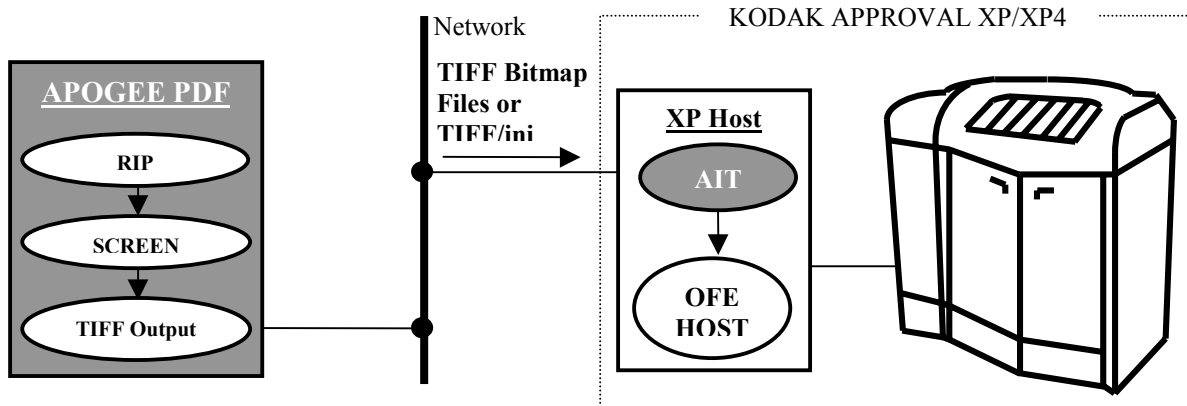


Figure 1. Interface Block Diagram, AIT within XP Host



■ Interface Specifications

An overview of the interface specifications is listed in Table 1.

Table 1. Specifications for APOGEE PDF RIP interface to APPROVAL¹

Digital Front-End (DFE) and Maker	APOGEE PDF RIP or PRINT DRIVE, AGFA
Required DFE Software	- APOGEE PDF RIP Series 2, V1 - PRINT DRIVE Series 2, Version 2, Update B
Supported APPROVAL Configurations	KODAK APPROVAL XP or XP4, 2400 or 2540 dpi
Interface Basis	AIT, Standalone TIFF Bitmap Files or TIFF/init
OFE Certified	Level 2
Recipe Colors	Simple Recipe implementation
Supported Donor Media	All
Supported Halftone Screens	- AGFA Balanced Screening - No support for Stochastic Screening
Interface Requirements, Minimum	The interface requires the following: <ul style="list-style-type: none"> • KODAK APPROVAL XP/XP4 Standard Configuration (Harlequin RIP becomes optional) Version 1.4R1 • AIT Software Version 2.0 • Agfa APOGEE PDF RIP Series 2, V1 or Agfa PRINT DRIVE System Series 2, Version 2, Update B

In regards to throughput, the throughput data for the standard APPROVAL XP/XP4 system applies:

- Baseline: 4 pph (16 pages per hour) for XP4, or 15 minutes per 4-page proof
- Extra time for recipe when media usage is optimized²: 2 minutes per recipe component

Throughput values specified above apply when there is a sustained queue of jobs. The first drop time exceeds the standard first proof drop time by the time that is required for the AIT to process a file (as much as 15 minutes).

¹ Please refer to the [Glossary in Table 2](#) for precise definitions and detailed descriptions.

² When media usage is optimized, the donor sheet stays on the drum, the print-head is moved to home position, and a separate pass is made to expose a recipe color component. Currently, media usage is always optimized by the AIT software.



■ Theory of Operation

As illustrated in Figures 1, this interface requires an Agfa APOGEE PDF RIP (Series 2, Version 1) or an Agfa PRINT DRIVE System (Series 2, Version 2, Update B).

The interface also requires:

- A KODAK APPROVAL XP/XP4 (standard configuration minus a Harlequin RIP unless required) with minimum version 1.4R1 Host software, and
- AIT software version 2.0. This software must reside on the XP Host Workstation.

Technical operations may be summarized as follows:

1. APOGEE PDF RIP can output TIFF Bitmap files for proofing. These files may include spot colors, and they may be compressed (packbits, LZW, RLE and Group 4). TIFF Bitmap files are sent to pre-configured Hot Folders monitored by the AIT software.



AIT Hot Folders function more efficiently if they reside on the Agfa system to avoid multiple read/writes over the network.

2. The AIT Hot Folders are pre-configured to process the following:
 - Densities required for each separation for proofing,
 - Screening parameters for each separation to determine required laser numbers for proofing,
 - Color mapping, if necessary,
 - Recipe for spot colors, if necessary, and
 - Donor Laydown order.
3. The output of the AIT software is an OFE Job that is sent to the OFE Host (that resides on the XP Host) for proofing.



■ Exceptions and Cautionary Notes

Known concerns are as follows:

1. AIT on XP Host: When AIT is installed on the XP Host, any RIP software on the Host (Harlequin, RIP-A or BARCO FastRIP) must be disabled while AIT is running. The XP Host does not have enough resources to support a RIP, the AIT and the OFE Host simultaneously.
2. Memory: When AIT is installed on the XP Host, the minimum recommended memory for the XP Host is 512M.
3. Agfa Naming Convention: Agfa's naming convention for TIFF Bitmap files are unique. AIT requires a special logic to handle these names. This is a sensitivity that requires monitoring in the field. Agfa's naming convention for TIFF Bitmap files is ABC(1234)_1_PANTONE XXX CV.tif, where ABC is the original name of the file (the QUARK document name), (1234) is the job ID number, _1_ is the page number and "PANTONE XXX CV" is the color
4. Agfa '.ini' Files: The information contained in Agfa's '.ini' files are:
 - Number of Separations, and
 - Color of the Separation.Other information that is normally expected to be included in an '.ini' file but Agfa does not supply are:
 - Line screening for the proof,
 - Screening Angle per separation, and
 - Density per separation.
5. AIT Interactive Mode for APOGEE PDF RIP: Interface with the APOGEE PDF RIP works in AIT's Interactive Mode. Use File Acquire in AIT to select TIFF files generated by the Apogee RIP, select proofing parameters interactively and start the proofing process.
6. No Hot Folder Support for APOGEE PDF RIP: Hot folder mechanism in AIT is not supported for the Agfa APOGEE PDF RIP interface; i.e. when TIFF files are generated by the APOGEE PDF RIP, those files can not be placed in an AIT hot folder for processing. Agfa APOGEE PDF RIP does not generate any '.ini' files for the AIT.
7. Hot Folder Support for PRINT DRIVE: PRINT DRIVE interface in Agfa '.ini' file mode works with the AIT's hot folder. PRINT DRIVE generates TIFF files with an '.ini' file that contains the following information: File name, separation names, fastscan and slowscan sizes, resolution and number of separations. A separate hot folder is configured in the AIT with the following parameters: Screen angle per separation, line screening for the job, density value per separation, laydown and color mapping. The TIFF files and the accompanying '.ini' file will be placed in the AIT hot folder for processing. A hot folder in this case is 'configured' as follows: A hot folder created, a template is generated using the INI Editor and the template is placed in the hot folder.

■ Reference Documents

The following documents may be referenced for further information:

1. ["Guide to Color Matching using Agfa Calibrator 4.x"](#).

Glossary

A glossary of terms and expressions is included in Table 2 below.

Table 2. Glossary and details (topics are alphabetically organized)

AIT Acronym for Approval Interface Toolkit. The AIT is an OEM product developed by Eastman Kodak Company and distributed by Kodak Polychrome Graphics. The basic AIT is a flexible tool with two types of inputs and two types of output connectivity. As illustrated in the following diagram, the main features of the AIT are as follows:

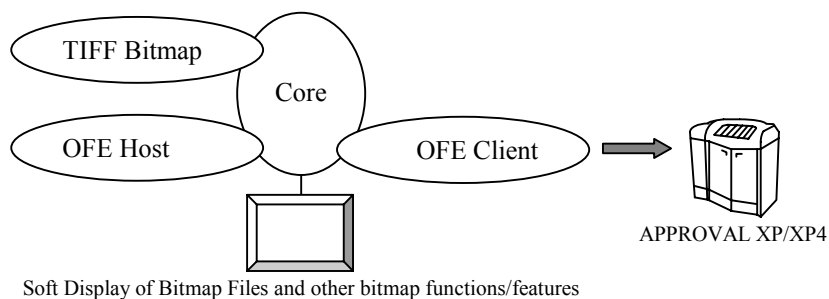
- **TIFF Bitmap Input:** The AIT Accepts TIFF Bitmap files. This is an important feature of the AIT because many RIP system manufacturers can readily generate TIFF Bitmap files, and for those who are reluctant to develop an OFE interface, this input channel becomes a very useful way to interface with APPROVAL.

TIFF Bitmap inputs come through an input Hot Folder, which may be configured for automated processing for a specific output device.

TIFF Bitmap inputs consist of one TIFF Bitmap file for each separation. Proofing parameters associated with the job may be part of the input Hot Folder configuration or it may be contained in a separate text file called an “.ini” file.

TIFF Bitmap inputs may be directed to a classic APPROVAL device or a new APPROVAL XP/XP4.

- **OFE Host Input:** The AIT can act as the OFE Host for OFE jobs that are intended for proofing on a classic APPROVAL system. The AIT makes a classic APPROVAL system OFE-compatible, thus extending its life with any new OFE interface developed for APPROVAL XP/XP4.
- **DSC-2 Input:** The AIT accepts standard DCS-2 files with embedded screened bitmap data. The data may be compressed using RLE, LZW or Group 4.
- **OFE Client Output:** The AIT can act as the OFE Client for TIFF Bitmap jobs received from a non-OFE-compatible digital front-end and intended for proofing on an APPROVAL XP/XP4.
- **Soft Display of Bitmap Files:** Bitmap data received through either input channel may be viewed on the monitor with the AIT. This display will show the real dot structure for any combination of colors within a job.



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OFE Acronym for Open Front-End. OFE is the standard interface specification for KODAK APPROVAL proofing systems. Its features are:

- OFE defines a two-way interface between a digital front-end and an APPROVAL system. With a two-way interface, a digital front-end can inquire the APPROVAL system for media and availability status as well as supplying the APPROVAL system with proofing jobs.
- OFE defines screened bitmap data as proofing data for proofing. This allows the digital front-end to RIP and screen a proofing job per its own standards, thus avoids any file conversions and maintains data integrity (in terms of screening and halftone dot structures).
- OFE is based on a standard physical and protocol connectivity. OFE Jobs are communicated over standard network using the standard Socket connections. This will allow any system with any processor and operating system to connect easily to APPROVAL systems.
- OFE is based on a Host-Client architecture, where the digital front-end acts as the OFE Client and the APPROVAL system acts as the OFE Host. This allows multiple OFE Clients to have a physical connection with a single OFE Host at the same time. However, only one OFE Client can have active communications with the OFE Host at any given time. Furthermore, the OFE Host maintains its own queue of OFE jobs, and this allows the OFE Client to disconnect from the OFE Host after an OFE job is fully communicated (i.e. the OFE Client does not have to wait for the proofing job to finish before it can disconnect).

TIFF Bitmap This expression is used for halftone-screened data in the standard TIFF format. TIFF Bitmap is the lowest denominator in terms of a file format common to many RIP systems.