

Medialogix

FotoWare Digital Evidence System

Service Definition Document

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Company Overview

Medialogix has supplied and supported government and public sector organisations with Digital Asset Management (DAM) and Digital Evidence Management (DEM) solutions since 2003. The systems provide secure end-to end workflow solutions for healthcare, forensics, marketing communications and PR departments.

Medialogix supply and support FotoWare software as well as developing their own products and have extensive experience of integrating their solutions within existing organisational architecture. They also have experience providing bespoke developments to enhance workflows and increase efficiencies. Medialogix are a Platinum Partner of FotoWare and Microsoft CSP partner offering a range of on-premises, cloud and hybrid solutions.

FotoWare is a Norwegian software company which, in the space of 25 years, has become a world-leading provider of Digital Asset Management (DAM) solutions. FotoWare was founded by Ole Christian Frenning (former press photographer 1974-1985 and photo editor of Aftenposten 1985-1991) and Anders Bergman (former leader of development at Hasselblad Electronic Imaging 1985 - 1994) in 1997 and was one of the first in the world to offer a DAM system.

FotoWare is a financially solid company that has enjoyed a AAA credit rating since 2005. See our online business report by Dun & Bradstreet. FotoWare is a private limited company based in Oslo, Norway and was founded in 1997.

FotoWare is a Microsoft Gold Cloud Platform partner. This is the highest tier cloud platform partnership and reinforces FotoWare's credibility as a stable and secure software vendor.

More than 200,000 users and 4,000 customers in a wide range of industries worldwide use FotoWare today.

System Architecture Overview

FotoWare have created suite of asset management products that are available as on premise, cloud based or hybrid solutions that are scalable according to individual requirements.

FotoWare software is accessed using a browser to the web interface for majority of the tasks. The software enables users on the network to manage, search and process images in the DAM system. The complex issues of preparation and management of assets prior to use is catered for automatically by the server products.

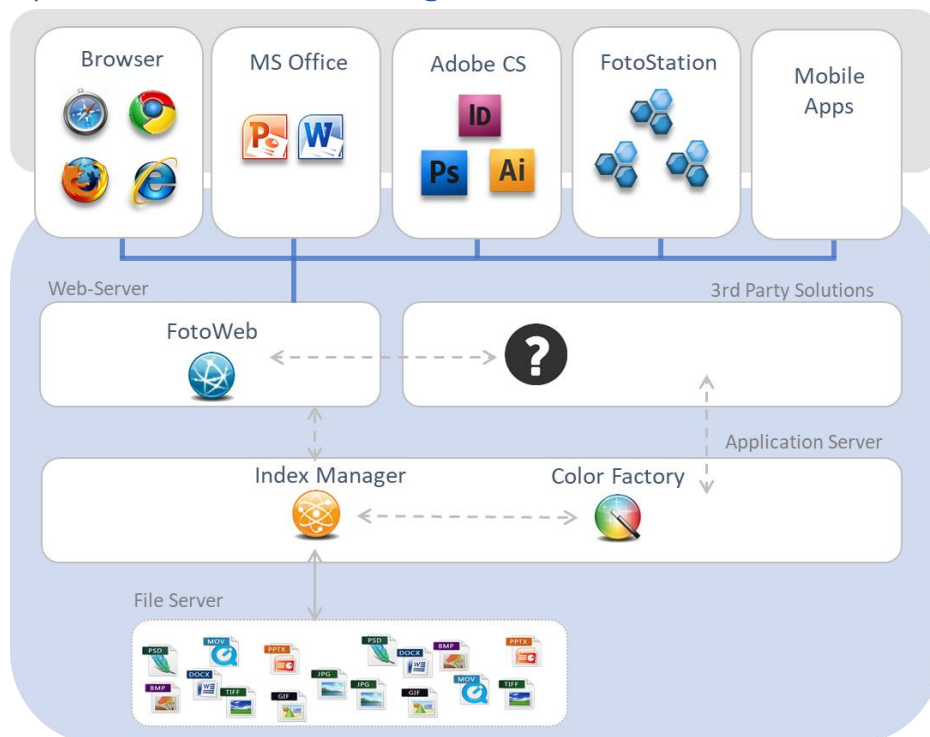
The software provides the following functionality.

- Imaging workstation software for the administration and viewing of imagery
- Server software for the creation of a media database and workflow
- Fast indexing and searching of assets
- A local intranet website(s) which is searchable by authorised persons
- Integration with Third Party systems using a RESTful API
- Conversion and migration of legacy assets
- Allowing 3rd party access via secure links

Uploading of media files to the server can be carried out using either web-based interfaces or client-side software depending on local requirements and preferences. Metadata associated with the media files is ingested on input either automatically or manually depending on configuration and workflow. Medialogix have also created desktop modules and mobile phone/tablets apps for specific tasks within the police and healthcare environments.

The server component (software and storage) can be hosted on-premise (Client) or on Microsoft Azure as a cloud solution or a hybrid combination of the two.

System Architecture Diagram



This is a high-level overview of the architecture. More detailed diagrams and information can be provided on request.

FotoWare DES (Digital Evidence Solution)

The following points will highlight the main features of the FotoWare system which meet the requirements of law enforcement agencies worldwide.

Metadata

- All metadata is XMP compliant according to industry standards
- Easily create new namespaces and fields - allowing organisations to create a new repository for any department within the police force
- All metadata fields are searchable

Audit Trail and evidential Master

- All evidential “master files” are stored on secure storage with an audit trail process to prove integrity – original master version is protected using secure storage methods.
- Master files are available to download by only specified groups of users (if required)
- All evidential and non-evidential files have their hash value stored in a secure database from point of upload until they are stored on the server
- All actions on the “working copy” files are logged in a database
- Asset integrity is maintained through “check-summing” to prevent accidental or deliberate tampering that may render them unsuitable as evidence in court. Integrity is validated before and after upload.

Flexible Security and Role-based Access

- Ensure security over sensitive and high-profile case evidence by defining security policies and assigning users to roles that restrict their access to permitted information and operations. The administration web portal gives you detailed activity logs and enables user and permissions management. Integrate with Microsoft Active Directory, Azure AD, and SAML-based Identity and Access Management solutions.
- 2-Factor authentication – if available from the identity management provider.

Uploading

- The upload tool allows the user to connect to 3rd party case management systems (e.g. Socrates) to reduce re-keying of information
- Users can select media files from different sources such as camera cards, body worn video devices, CD/DVD and external hard drives, DSLRs, police issued secure mobile phones, digital interview recording devices, mugshot/custody suite images, emergency 999 call recordings, vehicle collision investigation images or any other device in virtually all file formats from terminals in the police station.
- Data retrieved from suspect mobile devices, laptops etc can also be uploaded.
- Upload files from police issued mobile devices directly into the DEMS.
- Upload images, audio and video files and virtually any other format.
- Restrict files to certain groups of users during the upload process
- Upload large amounts of data without the user remaining logged in or leaving a browser window open. A background service securely transfers the data in the background allowing the users to log out or work on something else.
- Automated workflows for sending fingerprint and footwear marks into specialist analysis systems or identification systems. Automated processes based on media file metadata.

- Public upload portal – allowing members of the public submit images and videos.

Viewing and playback

- Files are viewable via the web interface
- Restrict files or change permissions
- If user has permission, they can correct incorrect metadata on multiple files at a time.
- Video playback to allow the user to play the video at different speeds, playback 1 frame or 5 frames, adjust brightness / colour settings.
- Video/audio streaming capability - to skip to various parts of the media file without requiring downloading
- Playback the video in the web browser without any plugins required
- Share media files with users and groups within the system by creating albums and PDF documents
- View media files in the DEMS via police issued secure mobile devices through native apps (iOS or Android).

Annotations and redactions

- Officers can quickly add or review comments and visual indicators on assets to help identify objects crucial to the investigation.
- Blur faces and number plates before images are sent out to the media / press.

Sharing

- Users can create “albums” and share media to other users and groups in the system.
- Users can create PDF documents and download for printing. Templates for witness statements, streamline forensic reporting and other evidential related reports.
- Send PDF documents of images into case management systems via integrations
- Share files with external agencies and organisations

Flexible Retention Policies

- Configure flexible retention policies, automatically purge evidence that is not connected to a case, set retention policies according to case type, keep evidence for as long as legally required.
- Setup to follow MOPI guidelines.
- Link 3rd party systems to provide case numbers for files to be marked for review/deletion.

Integrations

- Integrations into Digital Interview recording systems and public upload portals.
- Plugins for Microsoft Office to allow certain users to use media files directly from Word or PowerPoint without the need to download. Useful for filling witness statements and other forms in word and adding image files directly using the office plugins.
- Plugins for Adobe products
- Plugins and integration tools into any content management system
- RestFUL API to allow integrations into other systems such as Case Management Systems
- Integrate with AI systems (e.g. MS Azure Cognitive Services) for automated metadata
- Integrate with Video analytics tools and CCTV recovery systems such as Kinesense.

- Integrate with business intelligence tools such as Microsoft PowerBI to get the required information presented in the formats required.

Audit Trails

- Get detailed audit reports to find out all actions which have been carried out on a digital evidence file from the moment it entered the system.
- Reports can be customized to provide the precise level of information needed.

Software Summary

The following table details the software components required to implement the solution:

Software	Version	Operating System	Type (Client / Server)
FotoStation Pro Client	8.0	Windows 7 or above MAC OSX 10.5 or above	Client
Desktop Uploader	4.4	Client: Windows 7 or above Server: Windows 2016	Client & Server
FotoWeb	8.0	Windows Server 2016	Server
Clinical Uploader for Apple/Android devices	2.0	iOS and Android	Client
Police Uploader for Apple/Android devices	2.0	iOS and Android	Client
Pixel for Apple/Android devices	2.0	iOS and Android	Client
Index Manager	8.0	Windows Server 2016	Server
Color Factory	8.0	Windows Server 2016	Server
Connect	8.0	Windows Server 2016	Server
Reakt Plugin	2.0	Windows Server 2016	Server
PDF+ Plugin	2.0	Windows Server 2016	Server

Software Explained

This section briefly details the software components and their application:

FotoStation Pro Client (Client Application)

A client application designed for those who deal with digital image files and other multimedia files in the course of their work. Already used by many photographers and administrators, FotoStation is the de-facto standard for imaging browsing. Allows users to acquire images from cameras and scanners, view images on the screen with a wide range of different viewing options, add text information (metadata), edit images and manipulate image files, apply automated actions to batch process images and for the searching and retrieval of files. Allows printing of media files on photographic printers and minilabs.

FotoStation Pro also allows for ODBC data connections to be established to other data sources (ODBC) to allow for integration to other systems for the purpose of data retrieval, and a whole host of other useful functions.

Medialogix Desktop Uploader (Client/Server Application)

The Desktop Uploader minimises the impact of uploading large volumes of data through the web. This was developed to enable users to quickly upload images into the central Digital Evidence Management System. Although web technology allows for uploading of larger file sizes (GB) this can have a significant impact on internal networks and critical systems. Sometimes web browsers can time out or crash and others require the users to stay logged in during the upload process.

The Desktop Uploader enables efficient file ingestion and metadata entry for the user by uploading files in the background, at a predefined frequency and time according to network priorities. With

these policies the uploader can protect your network and ensure data integrity from the point of ingestion to the DAM/DEMS.

One of the great advantages is the background services which allow uploading large volumes at the end of the shift pattern, when multiple police staff start uploading. The background services allow the user to complete the upload process by selecting files and attaching metadata and then can log off the machine to go home. If the user remains logged into the computer unnecessarily it can be a security risk. A confirmation email to the user is sent once the upload job has completed.

Other features include database lookup and mapping of metadata fields from 3rd party systems such as Socrates. This can also interact with Artificial Intelligence (AI) Cognitive services either on the client side or server side for auto tagging of files.

The desktop uploader maintains the evidential integrity of the file by recording an audit trail of the hash values of the file through each step of the workflow. A working copy is created for day to day use and the original master is securely stored in a separate storage area.

FotoWeb (Server Application)

FotoWeb allows users to manage all their digital evidence which includes images, PDFs, spreadsheets, PowerPoint, Word documents as well as support for the playback and streaming of audio and video files.

It's a server component that allows for the distribution and sharing of media using the web/intranet. Files may be collected into albums which may be shared with other users. Invitation email links can be sent which link back to a particular album.

FotoWeb enables full control of user permissions and restrictions for the management of sensitive information.

As more and more people work remotely, the online commenting and annotations features in FotoWeb 8.0 help users interact and discuss specific files or collections.

As an extension to FotoWeb, plugins allow access to media files from directly within the interfaces of InDesign, Illustrator, Adobe Photoshop, MS Word and MS PowerPoint. Users can search and 'drag & drop' content directly into the above-mentioned applications.

FotoWeb can also be used to publish content to a Content Management System (CMS). FotoWeb will keep track of all published assets in a CMS giving total control. The "Selection Widget" allows users to easily select and prepare pictures for publish in the CMS.

Single Sign On (SSO) to manage access and leverage the convenience of automatic login. SSO can be employed with SAML2, OneLogin, Okta, VMWare, Active Directory, Azure AD. Multi-factor authentication can also be used if available from the identity provider.

The FotoWeb RESTful Application Programming Interface (API) is the recommended API for integrations with FotoWeb. Medialogix are experienced at integrating FotoWare with Police case management systems and hospital PAS and Electronic Patient Record (EPR) systems.

The API can also be used for the following purposes:

- Building custom user interfaces
- Building custom mobile apps

- Automating workflow
- Analytics

These are only examples. Any application that needs to read data from a FotoWeb server and/or update some of this data can make use of the FotoWeb API.

Medialogix PDF+ module for FotoWeb 8 (Server Application)

The PDF+ module for FotoWeb 8 creates PDF files of albums within user-defined templates designed using MS Word templates. This is particularly useful for compiling formal case reports with images embedded within the document. These documents can be witness statements, albums for court presentations and much more. The PDF documents can either be printed or electronically transferred to a different system.

Reakt module for FotoWeb 8 (Server Application)

Reakt plugin works using the FotoWeb API module and Azure Cognitive services to deliver advanced workflow management functions and automated tagging of metadata using AI. To use Azure Cognitive services, you must have a valid subscription with Microsoft. Other features include notifications to users when files arrive in their “basket” for review or approval.

AVIS Module (server application)

This module connects to digital interview recording devices and ingests the video, audio and document files into the FotoWare system. It also transforms all the metadata so it's fully searchable in FotoWare. This was originally developed for Gwent Police and currently they are the main user. At the time of writing, they have automatically transferred over 14,000 digital interview recordings into FotoWare using this module. The module can be used to connect to other systems which generate digital evidence files and metadata and ingest it into FotoWare without any user intervention. It can also be used in conjunction with our Public Upload Module whereby it “pulls” files from the public upload portal.

The future potential of this product is to ingest data and files from future technologies, such as driverless cars, virtual reality and implant technology.

Public Upload Module (server application)

This module is available on Microsoft Azure and can also be installed on a server in the DMZ at a police force.

This module provides two services:

- 1) Allow members of the public to fill a simple form and upload files. This can be done on a laptop/PC via or a mobile device via a web browser. This form can be published and branded to work alongside the existing website.
- 2) Send members of the public a special link to upload files related to a specific case or incident. In this scenario the member of the public doesn't need to fill out a form (if not required), they can simply select the files and upload them. This link could be emailed / texted directly to an individual or group of individuals. If there's a major incident where members of the public are asked to upload files, the link can be published on the police public-facing website and social media platforms.

Upon link generation a few metadata fields would be filled by the police staff. This metadata is automatically attached to the files sent by members of the public.

Files are “pulled” from the public upload portal using the AVIS module. Once the file has successfully downloaded it can be deleted automatically from the public upload portal, which optimises the use of storage.

File content is analysed using AI cognitive services and certain type of files can be sent for review or filter, e.g. adult content uploaded maliciously or gruesome content which needs to be vetted by specialists to protect members of staff. Files are also analysed for viruses etc before they reach police networks.

Medialogix Mobile Uploaders for Apple/Android devices

These products are cross platform phone/tablet applications to search, organise and view digital files. With increasing volumes of digital files being created on mobile devices, this app extends FotoWare functionality onto these devices. This mobile app provides more advanced functionality in comparison to the mobile app packaged with FotoWeb. It allows officers to take photos and upload directly into the DAM/DEMS. Allows users to attach metadata and search 3rd party case management systems such as Socrates for metadata. Based on the user’s credentials, they can also view and approve files.

Index Manager (Server Application)

Index Manager provides powerful search engine and real-time indexing for the FotoWare DAM. Indexing of any file type, with rendering of thumbnails and high-definition previews of nearly all image and graphic file formats. Optimized search results can be achieved by fine-tuning queries. Files can be stored anywhere in the network and accessed through a single point of entry. Metadata is embedded into the assets for flexibility - there is no additional metadata to maintain.

To comply with enterprise-level requirements, Index Manager can be configured for load balancing and automatic failover to ensure data integrity and 24/7 accessibility. The system is self-healing and automatically optimizes for maximum performance and uptime. All client-server communications can be secured using industry standard encryption to keep your assets safe. All network traffic is encrypted ensuring full security of files. The control over assets availability and sharing managed by the client administrators and allows 24/7 accessibility.

Index Manager takes full advantage of modern multi-core servers and provides very fast indexing, renditions and search services to all the users in your organization.

A single Index Manager Enterprise licence allows an organisation to index 3 million assets. Up to 4 licences can be stacked on a single server giving a total of 12 million files per sever. If you exceed that, just add more index manager licences on a second server and create a union! A FotoWare DES (Digital Evidence System) licence allows you to install as many instances of the software, thereby giving you the ability to index an unlimited number of files.

Color Factory (Server Application)

Color Factory provides workflow automation and image enhancement for efficient and powerful processing of files and metadata. Automatically enhance image quality without the need of expert software. Sort pictures based on contrast and quality to minimize the amount of manual work. Automate file format conversion, colour space conversion, ICC profile tagging, resizing and output dpi settings to prepare pictures for print. Colour convert PDFs to prepare them for print, using Lino CMS Engine or Adobe Color Engine. Monitor all activity on the server through the Operations Centre. Users can monitor processing queues, the time to process and the number of assets processed in the last 24 hours. Extensive logs provide additional details.

Automate the verification of metadata consistency. Sort assets based on metadata content, automatically add metadata based on rules and filter out files that require manual metadata tagging. Streamline and automate workflows to manage assets. Avoid duplicate content, maintain metadata consistency and purge outdated content automatically, to name a few common operations.

Purging content function allows to comply with MOPI guidelines with processes setup on the system or a list of files for deletion to be sent by another system.

Support and Incident Reporting

Support is available for customers who have purchased support through Medialogix Ltd. Telephone, email and remote-control support is provided as part of the package.

Support is available Monday to Friday 09:00 to 17:30 (excluding public Holidays) and can be accessed by raising a support ticket with our dedicated system. You can do this by sending an email to support@medialogix.co.uk

Extended hours and 24/7 support options are also available.

Support queries include; faults with the system, broken licences, answering technical queries, use of the software and minor configuration changes.

Support **does not** include; software development, design work, major configuration changes, major upgrades, training.

Support queries are logged in Medialogix's support system and are categorised as follows; 'New', 'Open', 'Pending' and 'Solved'.

Note: Please include client email address and telephone number on the support ticket as well as a full description of the support issue.

Clients can expect a maximum 2-hour response time once a ticket has been raised.

Medialogix provide remote access support in agreement with client access protocols.

PROFESSIONAL SERVICES

Onsite Engineering

Onsite Engineering includes upgrading of software or changes to the configuration. It can also be used for updating documentation or consultancy. It does not include software development or redesigning FotoWeb pages.

Software Development

Software development includes development of plugins to the FotoWare system or bespoke development and additional features to existing Medialogix software products.

Training

Training is onsite and is limited to 10 people. We provide training on End User and Administrator training. We can also provide bespoke training packages based on your setup and can provide "train the trainer" training.

Fully Managed Service

This is an optional service where we can provide up to 36 days per year (approx. 3 days per month) to carry out any change requests, monthly health checks and software patches every quarter.

Each day is equivalent to 8 hours, which means a fair use policy of 24 hours per month. Hours can be rolled over within the 12-month contract period.

On-Premises or Cloud?

Our solution can be installed in an on-premises environment, private cloud, public cloud or a hybrid environment.

Intellectual Property Rights

FotoWare Software IPR belongs to FotoWare a.s (Oslo). Medialogix software IPR belongs to Medialogix Ltd. Microsoft Azure and cloud infrastructure IPR belongs to Microsoft.