

# Frontis

The Archive Publishing System

**FUNCTIONAL SPECIFICATION**

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## Introduction

Frontis is an archive publishing system which allows you to publish your electronic records quickly on the internet or on intranets where they can be searched and browsed. The benefit of Frontis is to provide your customers, partners, researchers and general users with a gateway to an integrated electronic resource, thereby giving them access to the information they need.

The Frontis system can be configured to match your own corporate image, integrating seamlessly with your existing web site or intranet. It uses internet technology so unlike many other records management systems it does not require client software installation; all that you need is an internet browser.

The records can be browsed using a classification hierarchy or searched, including intelligent searching of structured datasets. Each record can contain documents, multimedia files or images, and can be related to each other so that you can view the transcription of a scanned document, both of which are stored in the system.

This document is the full functional specification for Frontis. It is based on the Requirements for Electronic Records Management Systems 2002 published by The National Archives in the UK. Although Frontis is not an electronic records management system, many of its functions are so closely related that The National Archives requirements provide a good functional specification.

The paragraph numbering in this document has been kept the same as TNA specification for ease of reference. Those parts of the specification which Frontis does not address are omitted, meaning that the numbering in this document is not sequential. However, simply because a numbered requirement is present, it should not be assumed that Frontis complies with that requirement as it appears in the TNA specification. This is because many of the TNA requirements are compound requirements and Frontis may not comply with the entire clause, but perhaps only with part of it.

In the following text the term 'record' has been retained, but readers should note that in the context of Frontis, a record is a static record or archive item. It is not an active record as would normally be the case in electronic records management systems. This is the core difference between Frontis as an Archive Publishing System and ERMS.

For a full understanding of the Frontis system, this document should be read in conjunction with the Frontis Use Guide, and the Frontis System Specification.

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## RECORD ORGANISATION

### **Classification scheme and fileplan**

A.1.1 (M) Frontis supports representation of a business classification scheme, by which electronic folders are placed in an organised structure, consistent with the nature of the classification scheme; the classification scheme and the folders which are classified against this scheme together make up the fileplan.

A.1.2 (M) Frontis is capable of supporting a hierarchical business classification scheme, with unlimited levels below the root level; and supports the use of varying numbers of levels at different points in the classification scheme.

A.1.3 (M) Frontis supports the initial construction of a business classification scheme, in preparation for the creation of folders and before the receipt of electronic records.

A.1.4 (M) Frontis allows an authorised user to add new classes to the classification scheme, except where records have already been created under an existing class; in which case, Frontis is capable of preventing the addition of new descendant classes to that existing class.

A.1.5 (M) Frontis does not impose any practical limit on the number of classes that can be created at any point within the classification scheme.

A.1.8 (HD) Frontis allows an Administrator to delete an empty class.

A.1.9 (M) Frontis prevents deletion of a class that is not empty, until such time as all records in that class, and its descendant classes, have been disposed of.

### **Class metadata**

A.1.12 (M) Frontis supports the use of metadata for classes, and restricts the ability to add or amend class metadata to an authorised user.

A.1.14 (M) Frontis provide two naming capabilities for classes:

- a textual name to each class so that the accumulation of labels in any hierarchical path through the scheme are used to construct the full text name of that class
- a structured numeric or alphanumeric reference to each class, the accumulation of which codes in any hierarchical path through the scheme are used to construct the full fileplan identifier for that class where the text name and code are equivalent in meaning and mirror the semantic structure of the classification scheme.

*Example:*

**Regional planning : Transport** is equivalent to **300 : 50 :**

**Regional planning : Economic development** is equivalent to **300 : 60 :**

**Regional planning : Public consultation** is equivalent to **300 : 70 :**

A.1.15 (M) Frontis allows both naming capabilities to be applied separately or together at the same time.

.....  
A.1.17 (M) Frontis allows repetition, at different points in the classification scheme, of a class text name which represents only one segment of the class name.

*Example: The full path*

**Contracts : Company name : Correspondence**

*is unique, but the final segment may be repeated in the path*

**Regional planning : Public consultation : Correspondence**

A.1.25 (M) Where a hierarchical classification scheme is in use, Frontis allows the addition of records to only the lowest level class in any single part of the scheme.

A.1.28 (M) Frontis does not impose any practical limit on the number of records which can be created under any class.

## A. 2 : RECORD CAPTURE AND MANAGEMENT

### **Capture**

A.2.4 (M) Frontis supports the capture of any electronic document which is stored as a single electronic file. Examples include:

- XML documents and forms
- word processing documents
- documents produced by text editors
- spreadsheets
- e-mail messages
- e-mail messages with attachments
- e-mail receipts
- encapsulated 'web pages', with all components, in a single physical file
- presentations
- desktop publishing documents
- PDF format documents
- document images from a scanning system
- single static images in common formats
- bit-mapped and vector graphics.

A.2.5 (HD) Frontis can capture records which are composed of more than one component, retaining a closely bound relationship between all components, so that they are managed as a single record. Examples include:

- multimedia documents, including those with animation and video components
- interlinked documents

A.2.6 (M) Frontis allows users to capture, store and publish electronic records in their native format.

A.2.7 (M) Frontis can capture an electronic document, even though the generating application is not present.

A.2.8 (M) Where Frontis captures records which are constructed of more than one component, it can capture the record in a way that retains the relationship between its constituent components

A.2.12 (HD) When capturing a document in its native format, Frontis can also capture a rendition of that document in a standard format, and of storing native format and rendition in a close association. Standard rendition formats include: XML, PDF and Postscript.

### **Record types**

#### **Record metadata**

A.2.30 (M) Frontis supports the use of metadata for electronic records

A.2.34 (M) Frontis is capable of capturing metadata acquired from the user at the time of declaration.

A.2.38 (M) Frontis allows entry of further descriptive and other specified metadata at a later stage of processing; it can restrict this ability to authorised users.

A.2.40 (M) Frontis is capable of allowing an authorised user to edit the content of selected elements of metadata of the electronic document.

A.2.43 (M) Frontis supports the definition of user-defined metadata elements for electronic records, by an Administrator.

A.2.49 (M) Frontis allocates an identifier, unique within the system, to each electronic record on declaration, that serves to identify the record from the point of declaration throughout the remainder of its life within Frontis.

**Move, copy, extract and relate**

A.2.50 (M) Frontis allows an electronic record to be re-assigned to another electronic folder or part, and is capable of restricting this ability to an authorised user.

**Bulk import**

Frontis can import lists of transcribed records which have been exported from spreadsheets, databases or other storage systems. These are stored as structured datasets.

The user can define the data types included in any imported dataset, in order that searching can target the correct data.

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## A. 3 : SEARCH, DISPLAY AND PRESENTATION

A.3.1 (M) Frontis provides facilities for searching, retrieving and displaying classes and electronic records.

A.3.2 (M) Frontis provides a search and display interface via a web browser platform, to support retrieval and display of folders and records, and the class and record metadata.

A.3.3 (M) Frontis supports graphical browsing of the classification scheme, and browsing directly from a class to the folders created under that class; and the direct selection, retrieval and display of electronic folders and their contents through this mechanism.

### **Searching**

A.3.4 (M) Frontis is capable of searching for all records management metadata elements, including user-defined elements (noting requirement A.3.18).

A.3.6 (M) Frontis is capable of searching the full-text content of structured dataset records.

A.3.7 (M) Frontis presents an integrated interface for searching both metadata and record content.

A.3.11 (M) Frontis provides facilities for defining and storing saved searches, for reuse by end users.

A.3.15 (M) Frontis presents search results as a list of folders or records meeting search criteria; and notifies the user if the search results in a null set.

A.3.16 (M) Frontis can search for and retrieve a complete electronic folder, and all its parts and records, and display a list of all, and only, those parts and records in the context of that folder as a discrete group and in a single retrieval process.

A.3.17 (M) Frontis can search for, retrieve and list a set of electronic records taken from many different folders, by specifying values to be searched for in electronic record metadata or content.

A.3.18 (M) Frontis does not allow a user to have access to classes, folders or records or their metadata (according to configuration) by means of any search and retrieval function, where the access controls and protective markings allocated to those classes, folders or records prevent access by that user.

### **Display**

A.3.20 (M) Frontis enables the contents of any or all of the folders or records in a set of search results to be directly displayed without requiring a further search, or reentry of data already retrieved .

A.3.21 (M) Frontis is able to display the content of all the types of electronic records which it is able to capture, in a manner that:

- shows all the features of visual presentation and layout as rendered by the generating application package
- displays all components of an electronic record together as a unit.

.....  
A.3.23 (M) Frontis supports simultaneous retrieval and display of classes, folders and records by multiple users.

A.3.24 (M) Frontis is capable of displaying all available metadata associated with a folder or electronic record on request.

A.3.27 (HD) Frontis allows the initial search results – that is, a list of folders or records – to be printed.

**Presentation**

A.3.30 (HD) Frontis supports the presentation of:

- whole classes, including selected elements of class metadata and a list of folders which that class contains
- whole folders, including selected elements of folder metadata, and a list of record titles which that folder contains
- specified electronic records, including record content and selected elements of record metadata

## A. 5. ACCESS CONTROL

### **Access to ERMS**

A.5.1 (M) Frontis provides an authentication mechanism which controls access and which validates each user attempting access at the start of each user session, linking the user-id to a valid user profile.

A.5.3 (M) Frontis allows:

- new users to be defined and identified
- existing users to be deleted by an Administrator at any time.

A.5.4 (HD) Frontis allows a user to be defined with administration rights over only a section of the classification scheme; that is, define a Local Records Officer.

### **Access control markings**

A.5.5 (M) Frontis supports the definition of all access control markings required prior to their allocation to a user, class, folder or record.

A.5.6 (M) Frontis restricts the ability to define and maintain available access control markings to an Administrator.

A.5.7 (M) Frontis grants each user the ability to allocate to folders and records the access control markings (which have already been defined) which that user has been allocated as access permissions.

A.5.8 (M) Frontis does not allow the allocation to folders and records of access controls by any users who are not themselves allocated those same access permissions.

A.5.9 (M) Frontis supports use of a protective marking scheme in order to control which users are allowed access to which records, folders and classes, consisting of a hierarchy of security categories of at least five levels, from unrestricted access at the lowest level to highly restricted access at the highest level.

A.5.10 (M) Frontis supports use of access control markings which identify:

- pre-defined groups of users, and separately
- individual users,

in order to control which users are allowed access to which electronic records, folders and classes.

### **User profiles**

A.5.11 (M) Frontis requires the definition of a user profile for each user known to the system. A user profile identifies a functional role for the user, and enables allocation of access control markings to that user; and requires information necessary for valid authentication (for example, user-id and password).

A.5.12 (M) Frontis supports the allocation of a single security category and membership of multiple pre-defined access groups, recorded in the user profile for each user known to the system; and restricts the ability to allocate these markings to an Administrator.

A.5.13 (M) Frontis requires each user to be allocated exactly one hierarchical security category, with the default category being the lowest level of the hierarchy.

A.5.16 (M) Frontis allows changes to be made to a user profile at any time, and restricts this ability to an Administrator.

### **Roles**

A.5.17 (M) Frontis supports the definition of a set of user rôles, which control the assignment of rights to specific functions or groups of functions; and restricts any ability to define or customise these roles to an Administrator.

A.5.18 (M) Frontis ensures that all users are allocated to one or more user rôle(s).

A.5.19 (M) Frontis can limit access to system functions and facilities, so that all users will only be able to carry out those functions which are permitted by the user rôle(s) to which they have been allocated.

### **Allocation of access control to classes, folders and records**

A.5.26 (M) Frontis supports the allocation of all forms of access control markings to classes, folders and electronic records, including:

- security categories (protective markings)
- one individual username

A.5.28 (M) Frontis ensures that an electronic part will always inherit the access control markings allocated to the folder which it segments.

A.5.29 (M) Frontis enables exactly one security category to be allocated to a class, electronic record or folder, with the default category automatically being the lowest level of the hierarchy.

A.5.30 (M) Frontis ensures that all folders created under a class inherit a security category allocated to that class by default, unless explicitly overridden at the folder level.

A.5.34 (HD) Frontis allows a configuration option, to be set by an Administrator, which allows a record to have a higher level security category than the folder in which it is contained

A.5.35 (M) Frontis allows the addition of a descriptor to an electronic folder or record as an element of metadata, for informative use.

A.5.36 (M) Frontis supports the amendment of access control markings on classes, folders and records,

### **Custodian**

A.5.41 (M) Frontis enables a user to be identified as the responsible custodian for an electronic folder, and enables this identification to be changed at a later date.

### **Execution of access control markings**

A.5.45 (M) Frontis allows all users (unless otherwise restricted by functional rôle) access to all classes, folders and records which are not allocated an access control marking other than the lowest security category

A.5.46 (M) Frontis limits access to classes, folders and records which have been allocated a security category, only to those users who have been allocated an equivalent or higher security category

A.5.47 (M) Frontis limits access to classes, folders and records which have been allocated a pre-defined access control group, only to those users who are members of that group.

A.5.51 (HD) Frontis includes a configuration option which defines the behaviour of the access control mechanism so that:

- *either* a user who is not allowed access to a class, folder or record can never find out that it exists (i.e. the user can never see its metadata, in a search result list or at any other time)
- or a user who is not allowed access to an class, folder or record can find out that it exists (i.e. the user can see its metadata in a search result list) even though the user cannot access the contents of the record.

A.5.52 (M) Frontis ensures that a user who is not allowed access to an electronic record or folder cannot receive any information about the record or folder as a result of a full-text search on record content, which that user would not receive through searching on metadata.

#### ***Privacy and opening of records***

A.5.53 (M) Frontis supports the progressive addition of metadata to folders, records and extracts to inform data protection (DP), freedom of information (Fol) and environmental information (EIR) handling, including:

- information about release of folders and records under Fol, which may be used as a reference to retrieve full details in a different tracking system
- indicators on disclosability of folders and records under DPO, Fol and EIR.

## A. 7. REPORTING

A.7.1 (M) Frontis provides a reporting capability, for Administrators and other authorised users, to provide management and statistical reports on activity and status within Frontis.

A.7.3 (M) Frontis can produce reports listing all classes, folders and parts, structured according to the hierarchy of the fileplan.

A.7.5 (M) Frontis can produce reports listing all, or a restricted set of, user profiles known to the system.

A.7.6 (M) Frontis allows reports to be generated for screen display, for printing, and for both display and printing.

A.7.7 (M) Frontis supports reporting tools for the provision of statistics on the activities of users within the ERMS, including:

- the number of electronic folders created within a given period
- the number of electronic records created by a user or groups of users, within a given period.
- the number of electronic records viewed, within a given period.

## A. 8 : USABILITY

A.8.2 (M) Frontis consistently presents user interface menus, commands and other facilities in all parts of the application.

A.8.3 (M) Frontis uses consistent terminology to label functions and actions in all parts of the application.

A.8.7 (M) Frontis produces error messages which are meaningful and appropriate, and offers immediate prompts for actions to resolve the error wherever possible.

A.8.8 (M) Where validation errors are detected, Frontis attempts to describe the nature of the error, and offer a method of correcting the error, or cancelling the action.

A.8.9 (HD) Frontis removes the visibility of functions from users who do not have access to those functions in their allocated user rôle.

A.8.10 (HD) Frontis does not allow the intermediate steps of a function to be carried out if the user will not be allowed to complete the function because that function is disallowed by role allocated to that user.

A.8.11 (M) Frontis provides facilities for end users and Administrators which are intuitive and easy to use, and require as few actions as possible to carry out the function to the required standard; in particular, in normal operation, Frontis is able to:

- display the contents of a record from a search result list within three mouse clicks or keystrokes
- display metadata for a folder or record within three mouse clicks or keystrokes.

A.8.12 (M) Where on-screen windows are employed, Frontis ensures that where an end user is able to re-size and re-locate windows, the contents of those windows remain correctly aligned.

A.8.13 (M) Frontis supports multiple simultaneous display of folders and records.

A.8.16 (HD) Frontis is usable with a wide range of common accessibility software features.

A.8.17 (D) Frontis supports the use of, and navigation by, hyperlinks and other cross-references that are contained in records at time of declaration.

A.8.18 (HD) Frontis automatically presents default values for data entry fields where logically possible.

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## A. 9 : DESIGN AND PERFORMANCE

A.9.1 (M, A) Frontis provides a robust and flexible architecture that can evolve to meet the needs of a changing organisational environment, appropriate to the types of implementation for which Frontis is intended

### **Integrity**

A.9.2 (M) Frontis enforces data integrity, referential integrity and relational integrity at all times.

A.9.3 (M) Frontis ensures that all occurrences of classes, folders, records, parts and extracts are allocated a system identifier which is unique within the system.

A.9.6 (M) Frontis is capable of storing dates that refer to years in the previous, current and subsequent centuries.

### **Interfaces**

A.9.7 (M, A) Frontis supports a remote log-in facility, which provides the standard range of functionality which the system offers (as web based this is default).

A.9.8 (HD, A) Frontis provides an interface to one or more low volume, ad hoc, scanning system(s).

### **Disaster recovery**

A.9.11 (M, A) Frontis supports automated back-up and recovery facilities for all classes, folders, records, metadata, audit trails and configuration settings held in the system by scheduled backup of the storage database. Exact functionality is dependent on the storage system in use.

## **B.2 : DOCUMENT MANAGEMENT**

B.2.1 (M) Frontis provides some document management facilities as an integral part of the system.

B.2.6 (M) Frontis supports the creation of versions of electronic documents which are closely bound together.

B.2.7 (M) Where more than one version of the document has been created, Frontis supports the ability to define:

- the most recent version
- one specified version only
- all existing versions, and hold all of these as a single electronic record.

B.2.11 (M) Frontis allows metadata to be acquired from the user during the process of definition.