

**Simon Fraser
University**

**Archives and
Records
Management
Department**

Prepared by:
Richard Dancy

Date created:
August 19, 2004

Document status:
Provisional

Revision #:

Date last revised:



Archives Information System (AIS)

Technical Documentation Manual



AIS Technical Documentation Manual

Table of Contents

Functional Requirements

FUNC

1. Preliminary Statement (AIS 1)
2. Access Points (AIS 2)
3. Authority Control (AIS 2)
4. Physical Control (AIS 2)
5. Review of AIS Functionality *[forthcoming]*

Architecture

ARCH

1. Conventions Used in Entity Relationship (ER) Diagrams
2. ER Diagram: All Modules
3. ER Diagram: All Files
4. ER Diagram: Authority Control Entities
5. ER Diagram: Authority Control History Tracking
6. ER Diagram: Authority Control Link to Description Module
7. ER Diagram: Archival Arrangement
8. ER Diagram: Access Points
9. ER Diagram: Physical Control Entities
10. ER Diagram: Importing Records

Module Specifications

M-SPEC

1. Authority Control Module *[forthcoming]*
2. Description Module *[forthcoming]*
3. Physical Control Module *[forthcoming]*

File Specifications

F-SPEC

1. AccessPoint.FP5 *[forthcoming]*
2. AIS.FP5 *[forthcoming]*
3. AuthorityTerm.FP5 *[forthcoming]*
4. Box.FP5 *[forthcoming]*
5. CorporateBody.FP5 *[forthcoming]*
6. Description.FP5 *[forthcoming]*
7. Family.FP5 *[forthcoming]*
8. File.FP5 *[forthcoming]*
9. Fonds.FP5 *[forthcoming]*
10. Holding.FP5 *[forthcoming]*
11. Item.FP5 *[forthcoming]*
12. Location.FP5 *[forthcoming]*
13. Milestone.FP5 *[forthcoming]*
14. NonPreferredTerm.FP5 *[forthcoming]*
15. Person.FP5 *[forthcoming]*
16. RelationAT.FP5 *[forthcoming]*
17. Series.FP5 *[forthcoming]*

Scripts

SCPT

1. Administration scripts *[forthcoming]*
2. Record scripts *[forthcoming]*
3. Navigation scripts *[forthcoming]*
4. Find scripts *[forthcoming]*
5. Sort scripts *[forthcoming]*
6. Report scripts *[forthcoming]*
7. Print scripts *[forthcoming]*

8. Fields scripts [*forthcoming*]
9. Operations scripts [*forthcoming*]
10. Output scripts [*forthcoming*]
11. Help scripts [*forthcoming*]
12. Other scripts [*forthcoming*]

AIS TECHNICAL DOCUMENTATION MANUAL

FUNCTIONAL REQUIREMENTS



Purpose of this document

This document is the outcome of discussions held with Archives staff at the outset of the AIS project. The aim of those sessions was to identify the essential features required of an AIS.

In updating this document for inclusion in the AIS Technical Documentation Manual in July 2004, no attempt has been made to revise its statements. This is a planning document, not a reflection of current functionality.

Objective

Design a system to create, store and make available the information that is needed to manage the acquisition, preservation and accessibility of its archival holdings.

System

Must be able to use existing FileMaker Pro 5.5 server and client software. [note: in course of project, server and client software was upgraded to 6.0]

Server and clients to run on Mac OS X platform.

All AIS component files to reside on server.

Interface

Interface should be intuitive, user-friendly, type size legible.

Context-specific help should be available.

Finding aids

Must be able to produce hard copy finding aids from the AIS.

Options: (i) set up as report format printed from AIS; (ii) export as text and reformat in Word.

Future development: use PDF format to enable web users to download entire finding aid as single PDF document.

Conversion of data

Must be able to convert existing Word documents into new system with minimal "cleaning up" of data.

Web development

Access to AIS initially to be restricted to Archives staff. Expand access in three stages: (i) to researchers in reading room; (ii) to wider university community; (iii) to web users.

Initially will use AIS to generate html pages for posting on web-server.

Options for web access: (i) continue to produce html pages from AIS for posting on web-server, no web-access to AIS itself; (ii) web access to whole or part of AIS; (iii) web access to copy of whole or part of AIS.

Will need to upgrade to FileMaker Pro Unlimited for full web access.

Will need to explore security issues further.

Reports

Statistical reporting by (i) fiscal year; (ii) calendar year; (iii) semester.

What kinds of reports are required?

Authority control

Must be able to control name forms throughout system.

An authority record for the provenance of a fonds (corporate body, person or family) must be created before the fonds record is created.

Links to other programs

Must be capable of future development to integrate with other programs (FOI, records management, preservation management, general administration).

Information acquired in other program activities (especially records management) should be captured so it can be easily accessed and used for archival purposes.

Labels

AIS should be able to produce file and box labels.

Backup

AIS should be backed up as part of current server backup procedures: automatically backed up each night on Pyramid; manually backed up at end of each work day on zip disk (disk overwritten).



Purpose of this document

This document is the outcome of discussions held with Archives staff during the planning for the AIS 2 project. In updating it for inclusion in the AIS Technical Documentation Manual in July 2004, no attempt has been made to revise its content. This is a planning document, not a reflection of current functionality.

Definition

An access point is the application of a term established in one of the authority files (a name of a corporate body, family or person) to an entry contained in one of the description files (fonds, series, file, item).

Purpose of access points

Access points "facilitate the process of searching descriptions" (RAD). Access points will provide AIS users with an additional search strategy, using a controlled search vocabulary.

RAD requirements

RAD provides rules for the form and choice of **non-subject** access points. The main types are:

- Provenance
- Custodian
- Author
- Offices (offices held by a person and persons holding an office)
- Family membership
- Title

RAD requires former names of entities to be included as separate access points.

RAD leaves the form and choice of **subject** access points to the discretion of the institution.

Examples of types of subject access points are:

- Subjects
- Functions
- Documentary forms

Rules / standards

The Archives will need to develop standards re:

1. What types of access points should we use?
 - Recommendation: provenance, custodian, author. Subject access points could be developed at a later date.
2. To what levels of arrangement should we apply access points?
 - Recommendation: all fonds; series if different than fonds; files and items at the archivist's discretion. Access points will be especially useful at the series level to indicate sub-units responsible for creating the series (provenance access point).

Data entry and editing

1. The user should be able to **create** an access point from the descriptive record to which it will apply.
2. The user should be able to **delete** an access point from the descriptive record to which it has been applied.
3. In a description file, the user should be able to **view** all the access points that have been applied to the description.
4. In an authority file, the user should be able to **view** all the descriptions for which a name has been used as an access point.

Search

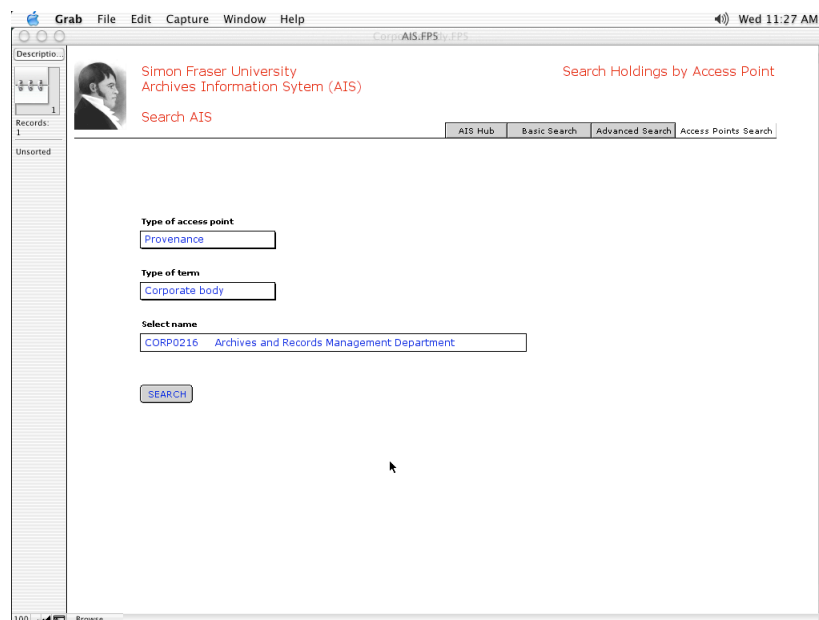
1. Users should be able to search access points, separately from other search techniques (i.e. there should be a separate user interface for access point searches).
2. Users should select from the lists of controlled terms when searching access points.

Finding aids

1. Finding aid formats (hardcopy and html) should be modified to include a separate heading for access points.
2. The entry should include the type of access point (e.g. "AccessPoint, provenance").

Mock-ups

Access Points Search (from AIS Hub)



The screenshot shows a web browser window titled "Grab" with a menu bar (File, Edit, Capture, Window, Help) and a system clock showing "Wed 11:27 AM". The browser address bar contains "Corp: AIS.FPS: FPS". The main content area displays the "Simon Fraser University Archives Information System (AIS)" logo and a "Search Holdings by Access Point" link. Below this is a "Search AIS" section with a navigation bar containing "AIS Hub", "Basic Search", "Advanced Search", and "Access Points Search". The "Access Points Search" form includes three input fields: "Type of access point" with the value "Provenance", "Type of term" with the value "Corporate body", and "Select name" with the value "CORP0216 Archives and Records Management Department". A "SEARCH" button is located below the form. The left sidebar shows "Records: 1" and "Unsorted".

Drop down menus:

Type of access point

- Provenance
- Custodian
- Author
- Officer
- Subject

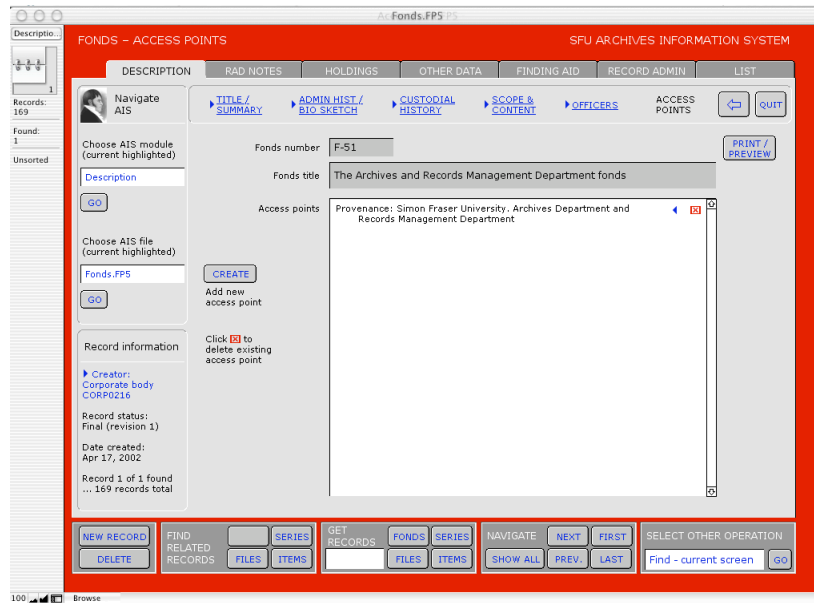
Type of term

- Person
- Corporate body
- Program
- Family
- Building
- Subject term

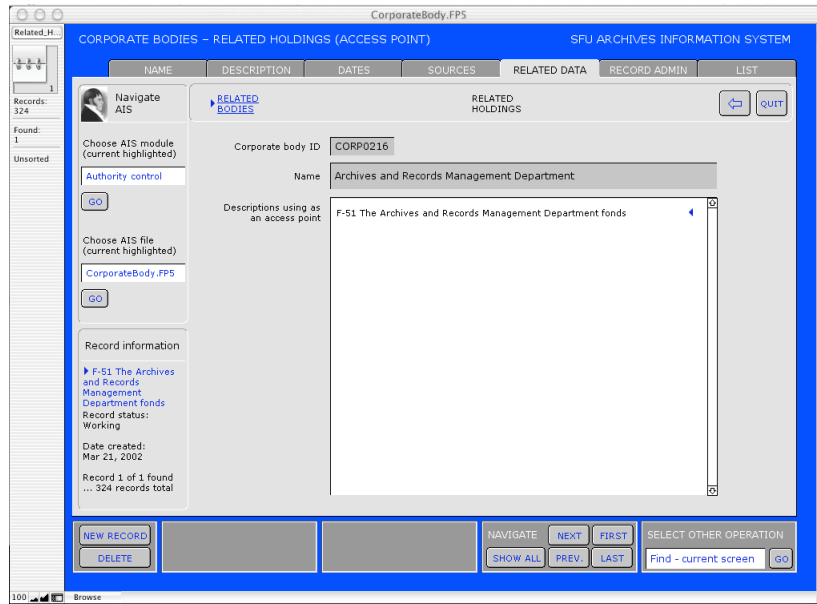
Select name

- Value lists will depend of "type of term" selected (e.g. list of corporate bodies).
- Will include "use" references to show previous names or non-preferred variants in list.

Access Points Display (from fonds record)



Access Points Display (from authority record)





Purpose of this document

This document is the outcome of discussions held with Archives staff during the planning for the AIS 2 project. In updating it for inclusion in the AIS Technical Documentation Manual in July 2004, no attempt has been made to revise its content. This is a planning document, not a reflection of current functionality.

Revision of existing files

When the AIS went "live" in October 2002 it included three authority files (corporate bodies, families, and persons) that were required for archival description (to establish the names of fonds creators). Completion of the Authority Control Module means developing these files, creating new files, and building a user interface in the AIS Hub (for searches and statistics).

Purpose of authority control

Authority files:

1. Establish the authoritative form of names used throughout the AIS and ensure that changes are registered in one place and applied throughout the system.
2. Track historical data about the entities named.
3. Provide a controlled vocabulary for use as access points to descriptions.

Entities

Three entities are currently tracked:

- File1 Corporate bodies
- File2 Persons
- File3 Families

It is proposed to track two additional entities:

- File4 Buildings
- File5 Legal Authorities

It is **not** proposed at the present time to develop an authority file to establish a controlled vocabulary for **Subject Terms** (future project).

Names

In each authority file we need rules for name formation. Three name formats will be distinguished:

- **List** name (name of entity as it should appear in lists, e.g. "English, Department of").
- **Common** name (official name of entity as it should appear in fonds title, e.g. "Department of English").
- **Full** name (common name plus reference to parent body as it should appear in an access point, e.g. "Simon Fraser University. Department of English").

Historical data

AIS authority files should:

1. Track historical data about an entity using fields drawn from the *International Standard for Archival Authority Records (Corporate bodies, Persons, Families)* – ISAAR (CPF).
2. Maintain the *Administrative History / Biographical Sketch* RAD element. This should reside in the authority record, rather than the fonds record. A fonds description would draw its administrative history from the related authority record. The benefits:

- Avoids duplication (e.g. when the same body is a fonds-creator and a collector of several collections).
 - Permits administrative histories of non-fonds creating bodies.
 - Enables use of already existing administrative histories at series description level.
 - Follows the ISAAR standard and facilitates future data sharing with other institutions.
3. Track name variants (non-preferred names), abbreviations and name changes (previous names) of authority entities.
 - File6 Name history
 4. Track reporting relationships and changes of relationships between authority entities.
 - File7 Relationships
 5. Track significant ("milestone") events of authority entities.
 - File8 Milestones

Search

Users should be able to search authority files through a variety of methods, including searches on (i) fields on current screen, (ii) all fields in current file, and (iii) all fields in all authority files.

- File9 Authority terms (a single file joining records from all other authority files, with minimal data fields).

Other rules required

We need to identify (and codify in rules) criteria to define and differentiate:

1. Corporate bodies (registered in the AIS) vs. functions / program areas / minor sub-divisions (not registered in the AIS).
2. Fonds-creating bodies vs. non-fonds-creating bodies.

3. Name changes [same corporate body, new name] vs. organization changes [new corporate body].

Link to the Archives program

1. Ensure that name changes are registered in related archival descriptions (e.g. fonds titles).
2. Generate drop-down lists of authority terms to provide controlled vocabulary for access points.
3. Create administrative histories / biographical sketches of non-fonds creating bodies (e.g. could be used in series descriptions).
4. Gather information already stored in authority files when writing archival descriptions (e.g. the user clicks a button and the AIS copies all relevant authority data into the administrative history fields as the starting point for a description).
5. Post authority records on the web as a resource for researchers (future project).

Link to the Records Management and FOI / POP programs

1. Facilitate management of semi-active holdings by tracking name and administrative changes of bodies with records stored in the URC.
2. Link bodies to the legal authorities that regulate / are administered by them.
3. Link name authorities to RM and FOI databases to provide drop-down list and registers changes.



Purpose of this document

This document is the outcome of discussions held with Archives staff during the planning for the AIS 2 project. In updating it for inclusion in the AIS Technical Documentation Manual in July 2004, no attempt has been made to revise its content. This is a planning document, not a reflection of current functionality.

Replacement of existing files

The AIS currently incorporates two pre-AIS locations databases (tracking archives stacks locations and URC locations). Completion of the Physical Control Module means replacing the various pre-AIS locations databases with redesigned files, modifying the existing AIS files as required, and creating a user interface in the AIS Hub (for searches and statistics).

Purpose of physical control

Track the physical location of holdings (semi-active and inactive) in order to ensure security, physical longevity and effective retrieval of material.

Requirements

1. Archival records should always be under physical control.
2. Do not track supplies, display material or theses.
3. Consolidate all locations in a single file (stacks, records centre, map cabinet, SMI room, isolation room, Fire King cabinet, oversize rows, processing shelves).

4. Location records must be able to register boxes (e.g. URC shelves), files (e.g. map cabinet), and items (e.g. SMI room).
5. Able to find groups of adjoining empty locations to facilitate assignment of material to locations.
6. Generate box and shelf labels.
7. Flag archival boxes that are not full, so that future accessions can be housed in existing boxes.
8. Flag URC boxes that are not full for generating departmental profiles (flag problem departments).
9. Generate statistics.
10. Flag high priority material for disaster-recovery salvage.
11. Flag boxes containing restricted material on printed box locations lists.

Links to archival description

1. Physical locations should be accessible from individual description records (e.g. a file's location should be visible from the file record).
2. Locations information should be used to generate date ranges and extents in archival descriptions.
3. Existing retrievals database will need to be modified to link to new locations file(s).

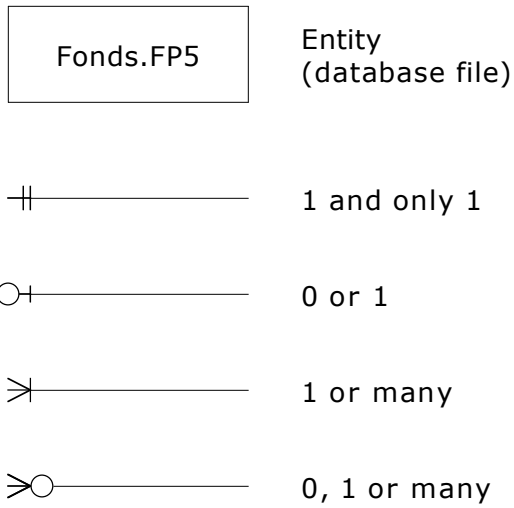
Links to Records Management program

1. Accommodate cases where creating body is not the same as the OPR.
2. Ensure that records can be found by current name, but retain original names for context.
3. Produce hard-copy locations lists for departments [html version a future project].

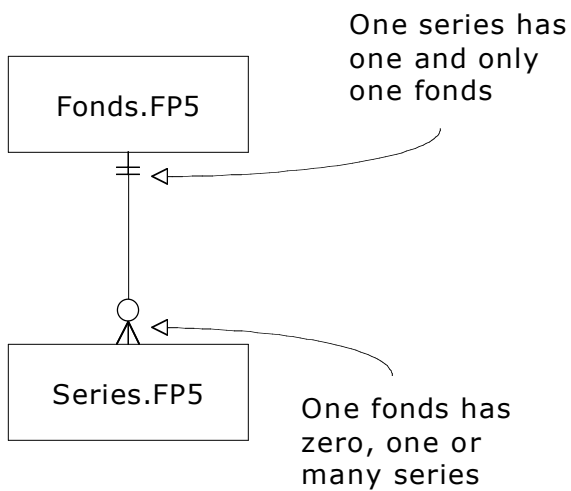
4. Use RRSAs to generate final disposition and disposal date of boxes [future project].
5. Track vital records.

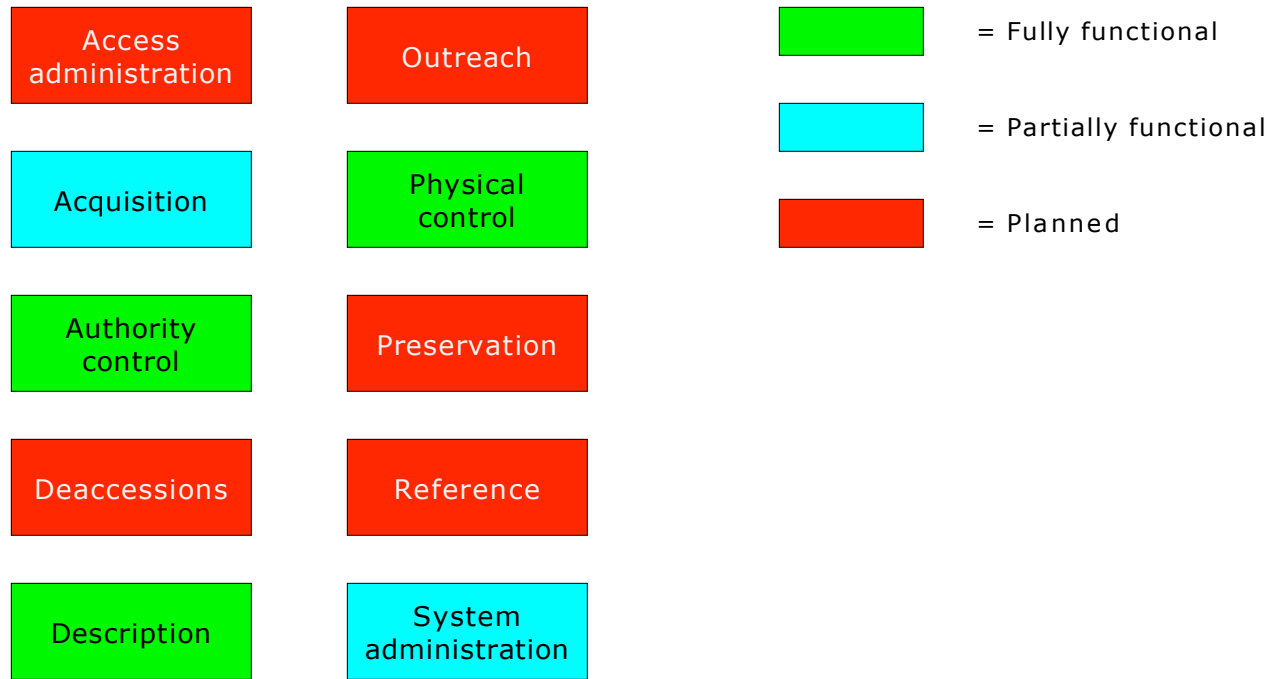
AIS TECHNICAL DOCUMENTATION MANUAL

ARCHITECTURE



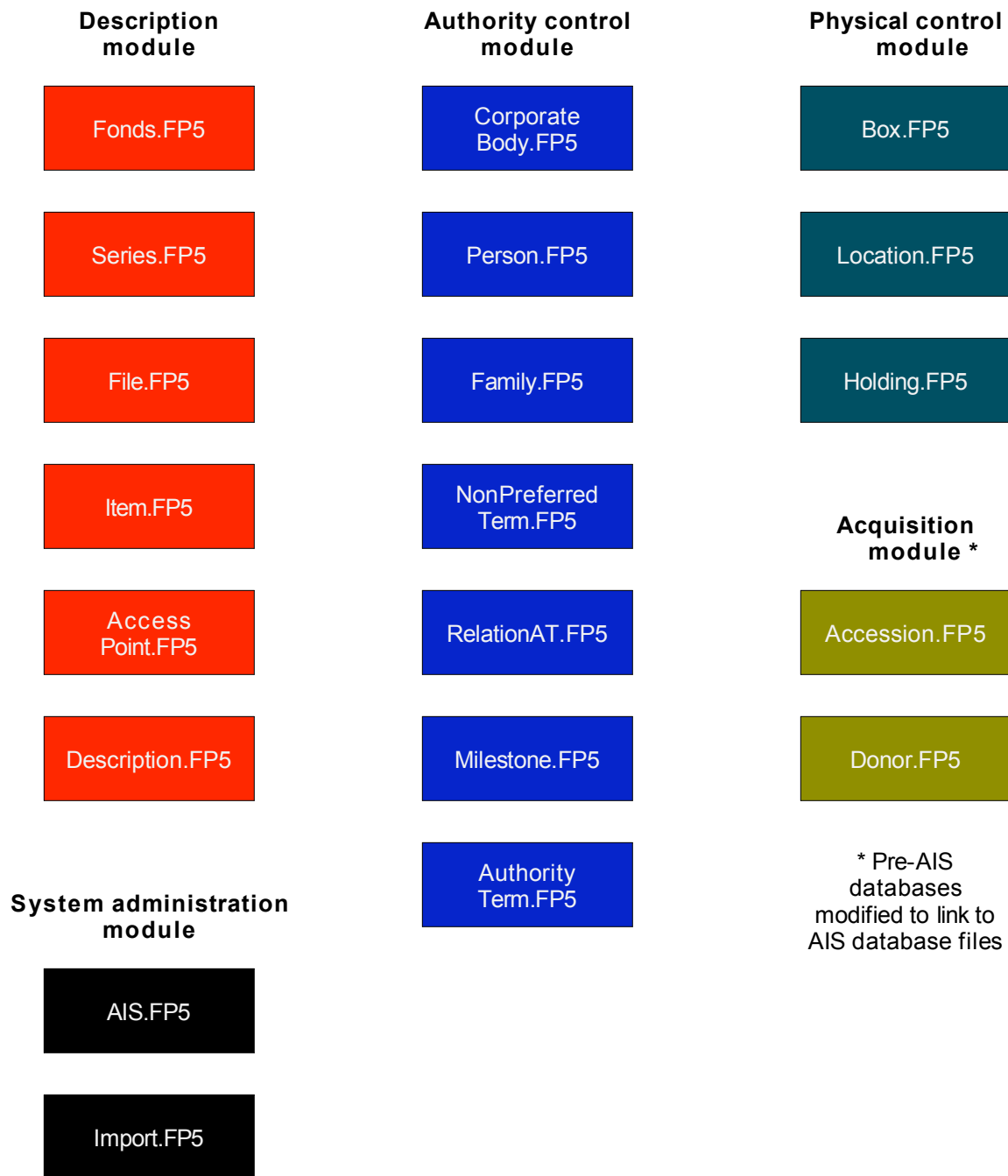
Example:





Notes

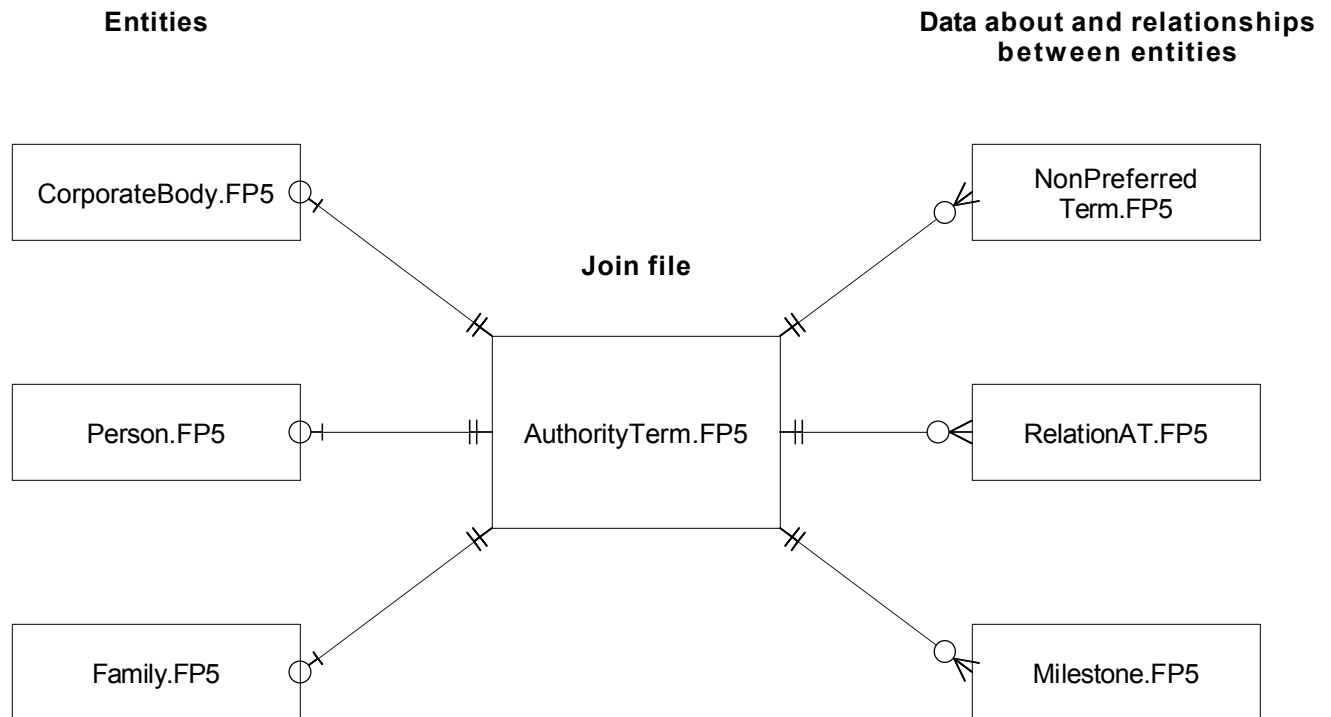
1. The modules represent the main functions of the AIS.
2. Each AIS file has a primary purpose which supports one of the module functions. In this sense each file "belongs" to one module, though data in any record in any file may be used by any record in any other file, regardless of the modules to which they "belong".
3. A module is "fully functional" when a user interface is available from the AIS Hub (AIS.FP5) which enables users to initiate actions across all files in that module (e.g. multi-file searches, reports).
4. A module is "partially functional" no user interface is available, but some of its core files are operational.
5. A module is "planned" when no user interface is available and no core files have been constructed. Some of parts of the function may be provisionally handled by fields in other AIS files.



* Pre-AIS databases modified to link to AIS database files

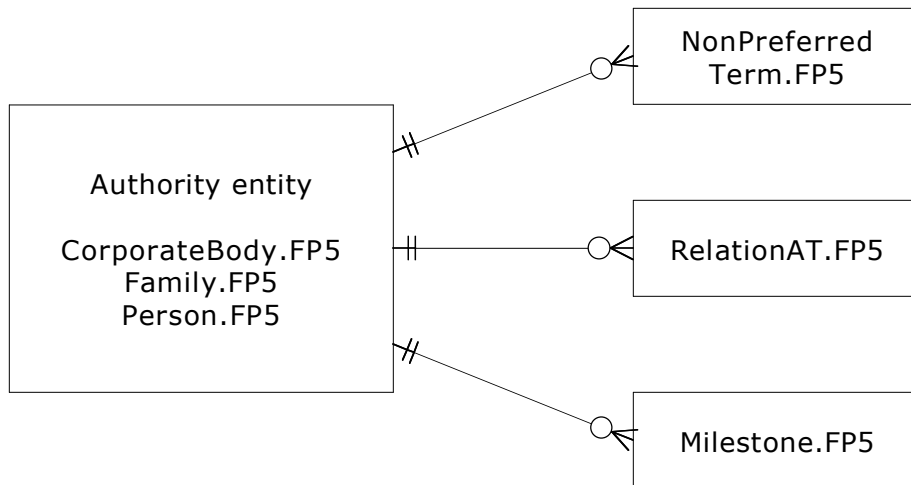
Notes

1. AIS.FP5 stores elements used by all or many other files in the system, e.g. start-up and closing scripts, buttons and icons.
2. AIS.FP5 has been given this name so that it will appear near the top of the list of databases on the server, and so that users will open up the system by opening up this file.
3. All records in all files in the AIS contain a field called *zk.constant.f*, which has a calculated, non-modifiable value = "constant". This field is used as a key to establish a constant relationship between every record in every file, which is used in some scripts (e.g. scripts to navigate to and from records in different files).
4. Import.FP5 is used in to facilitate importing file, item and series lists from Excel templates which can be downloaded from AIS.FP5.
5. The files used in the Acquisition module (Accession.FP5 and Donor.FP5) are pre-AIS databases that have been adapted to the system. In future development they will be redesigned according to AIS standards.
6. Description.FP5 and AuthorityTerm.FP5 are join files containing one record from each of the description files (fonds, series, file, item) and authority files (corporate body, family, person) respectively. Their function is to facilitate system-wide searches and generate drop-down lists. When a new description or authority record is created in the system, a related record is automatically created in Description.FP5 or AuthorityTerm.FP5. The join files should be refreshed regularly (through scripts triggered by buttons on System Administration screens).



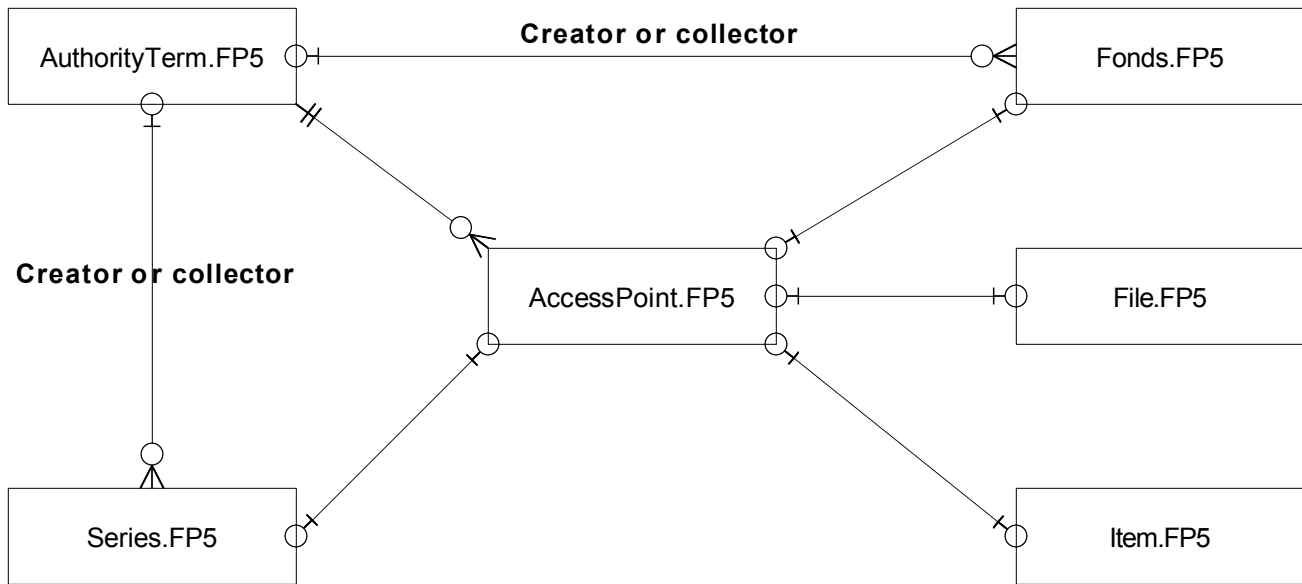
Notes

1. AuthorityTerm.FP5 is a join file containing all records from each entity authority file with minimal data fields to facilitate searches across different entity types and generate drop-down lists in other files.
2. *Name history* (NameHistory.FP5) includes name variants (contemporary alternative versions), name changes (previous names) and abbreviations. These also appears as entries in AuthorityTerm.FP5 to provide "use" references in drop-down lists for non-preferred terms (e.g. "University Archives - use Archives and Records Management Department").
3. A *relationship* (RelationAT.FP5) may link authority entities from the same file (e.g. one corporate body to another corporate body), but the entities occupy different fields (e.g. "A reports to B").



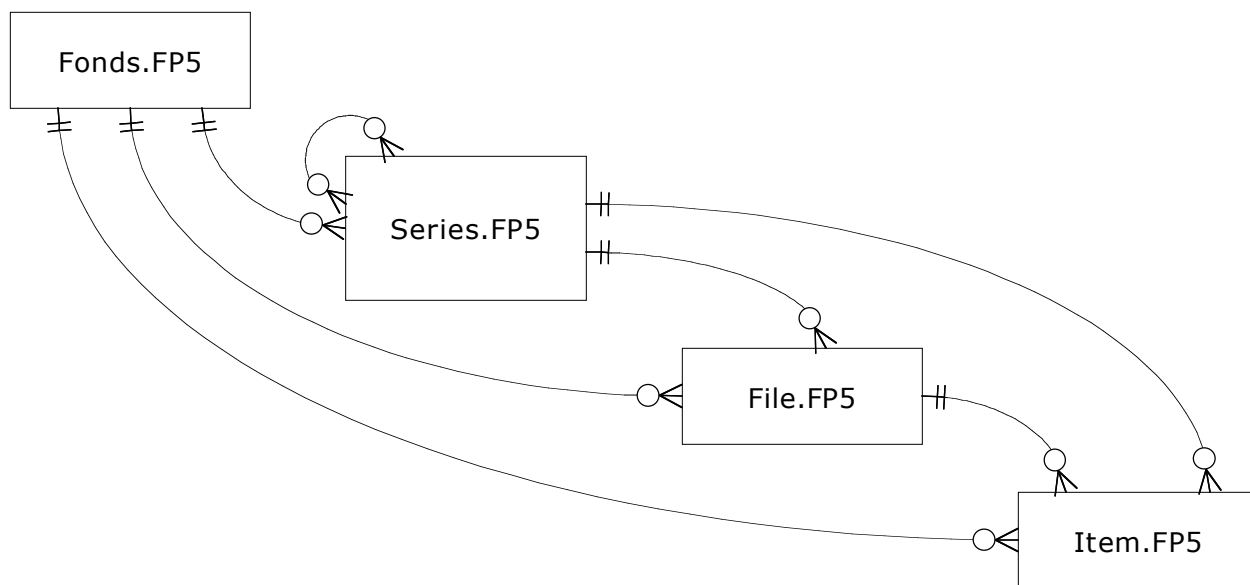
Notes

1. *NonPreferredTerm* include name variants (contemporary alternative versions), name changes (succeeding names) and abbreviations.
2. *Relationships* may link authority entities from the same file (e.g. one corporate body to another corporate body) or from different files (e.g. one person to one corporate body).
3. The following types of relationships are registered in *RelationAT.FP5*: reporting relationships (2 corp bodies), successor-predecessor (2 corp bodies), transfer of function (2 corp bodies), association (2 corp bodies), membership (person as officer of corp body, person as family member), ownership (person or family and corp body), but the entities occupy different fields (e.g. "A reports to B").
4. *Milestones* register major events in corp body, person or family's life.



Notes

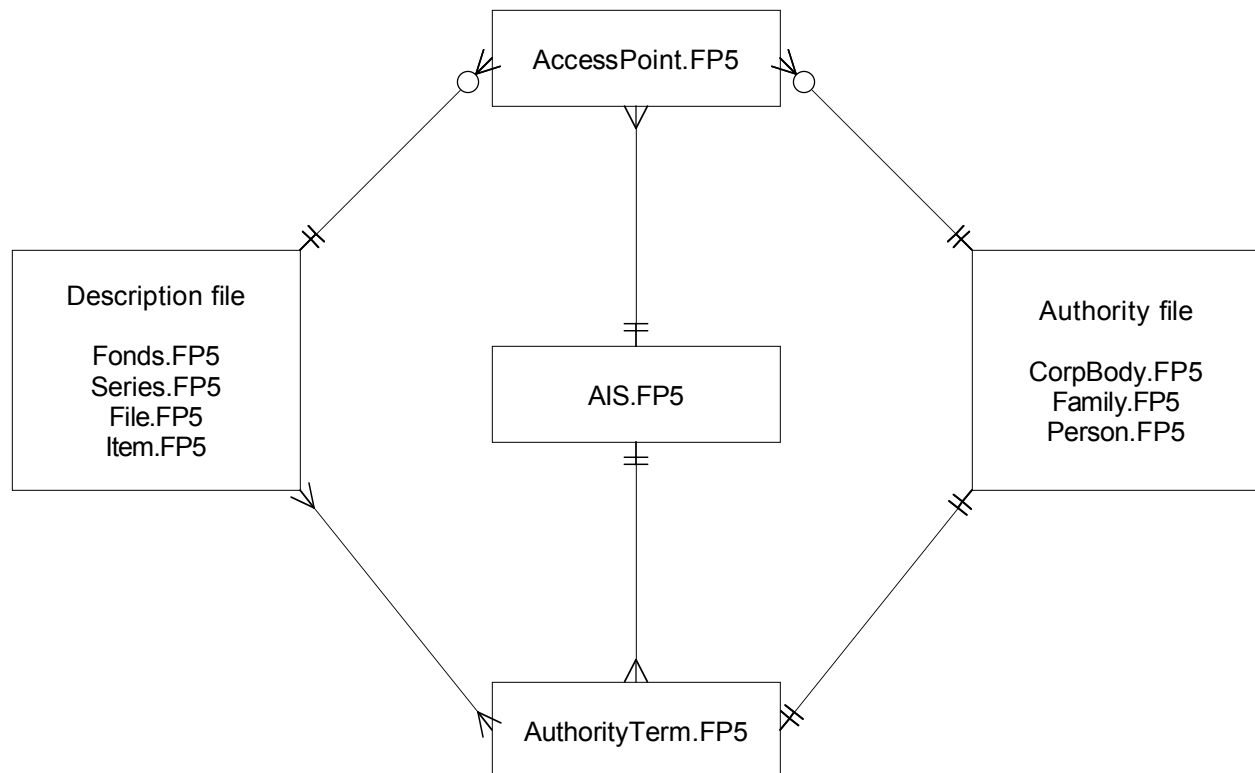
1. A corporate body, person or family (registered in AuthorityTerm.FP5) can create only 1 fonds, but many collections (both registered in Fonds.FP5); and can create many series (registered in Series.FP5).
2. When applying access points to descriptions, AuthorityTerm.FP5 provides the controlled vocabulary through drop-down lists.



Notes

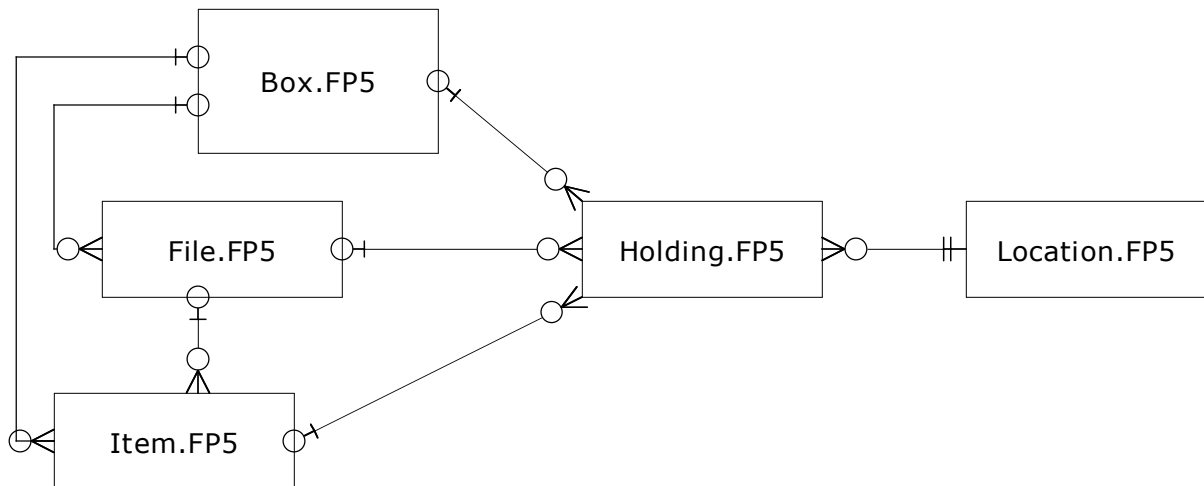
1. A record in Fonds.FP5 is classified as either a *fonds* or a *collection* (typeHolding field).
2. There is no provision for *sous-fonds* as a level of arrangement.
3. There are three levels of arrangement within Series.FP5: *series*, *sub-series*, *sub-sub-series*. A record in Series.FP5 can be related to many records in the same file (e.g. a series to its constituent sub-series).
4. Files and items may be directly related to a fonds without being related to a series (e.g. a fonds which has no series but rather consists only of files or items).
5. The primary key (unique identifier) for fonds, series and files reflect their location in the hierarchy of arrangement. For example:

F-51 (fonds)
F-51-1 (series)
F-51-1-1 (sub-series)
F-51-1-1-1 (sub-sub-series)
F-51-2-1-0-1 (file: includes -0- where a level of arrangement is empty)
6. The primary key for items does not reflect their arrangement, but is assigned sequentially within a fonds (e.g. F-51-item25).



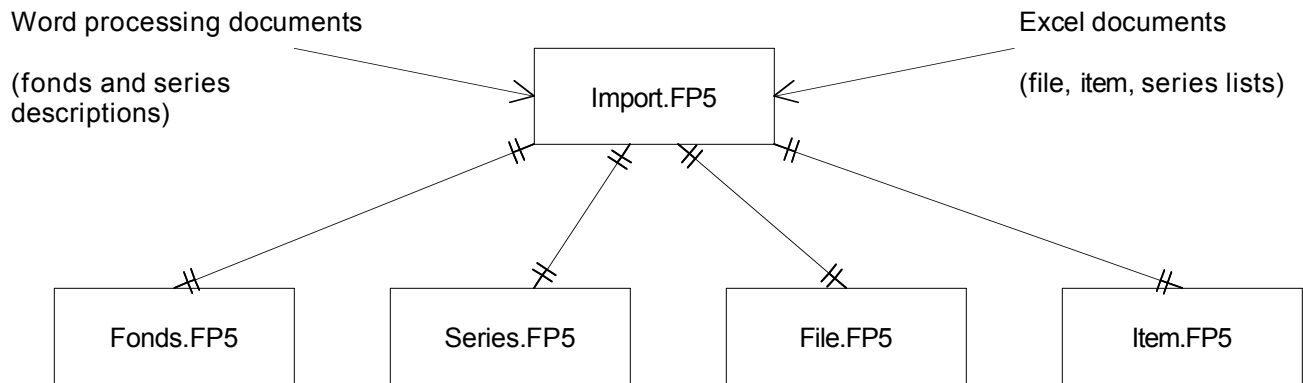
Notes

1. AuthorityTerm.FP5 is used to generate selection lists in description files (Fonds.FP5, Series.FP5, File.FP5, Item.FP5) when selecting authority terms for use as access points. Every record in AuthorityTerm.FP5 is available to every record in the description file (many-to-many relationship).
2. AuthorityTerm.FP5 is a join file. For every record in each separate authority file (CorporateBody.FP5, Family.FP5, Person.FP5) there is one record in AuthorityTerm.FP5 (one to one relationship).
3. AIS.FP5 (AIS Hub) contains the search interface for searching access points. The search interface draws a selection list of terms from AuthorityTerm.FP5; the selected term is used to conduct a search in AccessPoint.FP5.



Notes

- 1 *Holding* record = 1 *Object* (box, file or item) linked to 1 *Location*.
- 2 *Files* and *Items* may be stored directly to a shelf location (e.g. map cabinet, artifact shelf) registered in *Location.FP5*; typically, however, files and items are registered to a *Box* which is then shelved and registered in *Holding.FP5*.
- 3 One *Object* may occupy more than one *Location* (e.g. a URC tote box stored in shelving designed for archival boxes); and one *Location* may include more than one object (e.g. shelves in the SMI room can accommodate multiple boxes).
- 4 When *Boxes* are destroyed, the *Holding* record is deleted, but the *Box* record remains in the system, with its former location tracked in the "location history" field.



Notes

1. Import.FP5 contains scripts which automate the import of previously existing Word finding aids and newly created Excel file, item, and series lists.
2. Excel templates for creating file, item, and series lists can be downloaded from AIS.FP5. The templates have been set up to work with the import scripts and should always be used for creating lists.
3. Records are deleted from Import.FP5 after they have uploaded to the appropriate AIS file.