

Case File Service – Case File Record Capture Use Case
And
Case File Part Associate Use Case (amended)
Functional Requirements and Attributes
for
Records Management Services
December 7, 2005

by

Daryll R. Prescott
Kenneth Hawkins, Ph.D.

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INTRODUCTION

This technical report extends and clarifies the CASE FILE SERVICE – CASE FILE RECORD CAPTURE USE CASE and CASE FILE PART ASSOCIATE USE CASE documented in the “Functional Requirements and Attributes for Records Management Services, December 7, 2005.”

Reviewers from the National Archives and Records Administration (NARA) and Georgia Technical Research Institute (GTRI) commented the CASE FILE SERVICE – CASE FILE PART ASSOCIATE USE CASE does not provide the same level of detail in the other use case of the same report. Specifically, its functional requirements do not explicitly provide for the association of multiple case file parts as indicated in the purpose statement and the Unified Modeling Language (UML) class model for the use case.

As a bi-product of addressing the above comments, it was noted the syntax used in the CASE FILE SERVICE – CASE FILE RECORD CAPTURE USE CASE was not consistent with that used in the first use case of the December 7, 2005 report: RECORD CAPTURE SERVICE – RECORD CAPTURE USE CASE. In order to normalize them, CASE FILE and CASE FILE RECORD are changed to read DECLARED CASE FILE RECORD, CAPTURED CASE FILE RECORD, and MANAGED CASE FILE RECORD where appropriate.

The CASE FILE SERVICE – CASE FILE RECORD CAPTURE USE CASE and CASE FILE PART ASSOCIATE USE CASE contained in this technical report replace those found in the report “Functional Requirements and Attributes for Records Management Services, December 7, 2005.”

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BACKGROUND

The intended functionality of the CASE FILE SERVICE is to provide for the capture of case file records, collect records management information about the management of the case file over its life cycle, and to allow for the association and disassociation of case file parts¹ of the case file record during its life cycle.

As defined here, the CASE FILE SERVICE allows for the management of several types of aggregating record. Experts from different business domains have different conceptions of an aggregating record, e.g. case file, folder, dossier, project file, transactional file, subject file. The CASE FILE SERVICE allows for the implementation of business rules aligned with these varying conceptions of the aggregating record. What one calls it is less important than the characteristics and behaviors it exhibits. Because of the level of abstraction at which the service is documented, there is no need to attempt defining a complete set of aggregating records or to normalize their definitions. Such definitions are unnecessary for the documentation of functional requirements that can carry out business rules related to an aggregating record at the level of abstraction for these use case. However, business owners at implementation might find it necessary to specify in greater detail the unique characteristics of a specific aggregating record type in accordance with their business rules.

Among the core characteristics of a case file are the:

- Aggregation of individual parts.
- Disposition of any one part during active use in accordance with business rules.
- Management of all parts as a single record.
- Disposition of the whole case file when business rules state the activities in the first two core characteristics are finished and the case file be set aside as evidence of the complete business requirement.

For example in the purpose statement of the Case File Service – Case File Record Capture Use Case, it is stated that:

A CASE FILE at its point of final aggregation will usually be managed as a single record but may – by business policies or procedures – have different dispositions for each record or part within the CASE FILE.

Additionally, in the purpose statement of the Case File Service – Case File Part Association Use Case, it is stated:

The **Case File Part Associate Use Case** provides for uniquely identifying relationships between a CASE FILE and a CASE FILE PART. A CASE FILE is usually managed as a single record but may – by business policies or procedures – have different dispositions for each CASE FILE PART within the

¹ Case File Part is used as a neutral term without engaging in the debate whether items in a Case File are considered documents or records.

CASE FILE. A **CASE FILE** at its point of final aggregation will usually be managed as a single record. The **Case File Part Associate Use Case** supports the concept of associating a single **CASE FILE PART** to one or more **CASE FILE**.

The **Case File Part Associate Use Case** provides the ability to link items related because of a business act, transaction, case, investigation, etc. to form a **CASE FILE**. The **Case File Part Associate Use Case** supports the creation of a Case File – the aggregation shows evidence of activities related to a common business activity usually taking place over time. Examples would be personnel file, court case file, medical record, dental record, training record, etc.

Finally, the UML class model of the case file service shows that a case file record is composed of one or more case file parts. A case file part association is provided by the connector between the case file part and its case file record. The connector and its cardinality indicate there must be at least one and can be many case file parts for a case file record – where “1..*” is read “one or more.” See Figure 1: Case File Part Association.

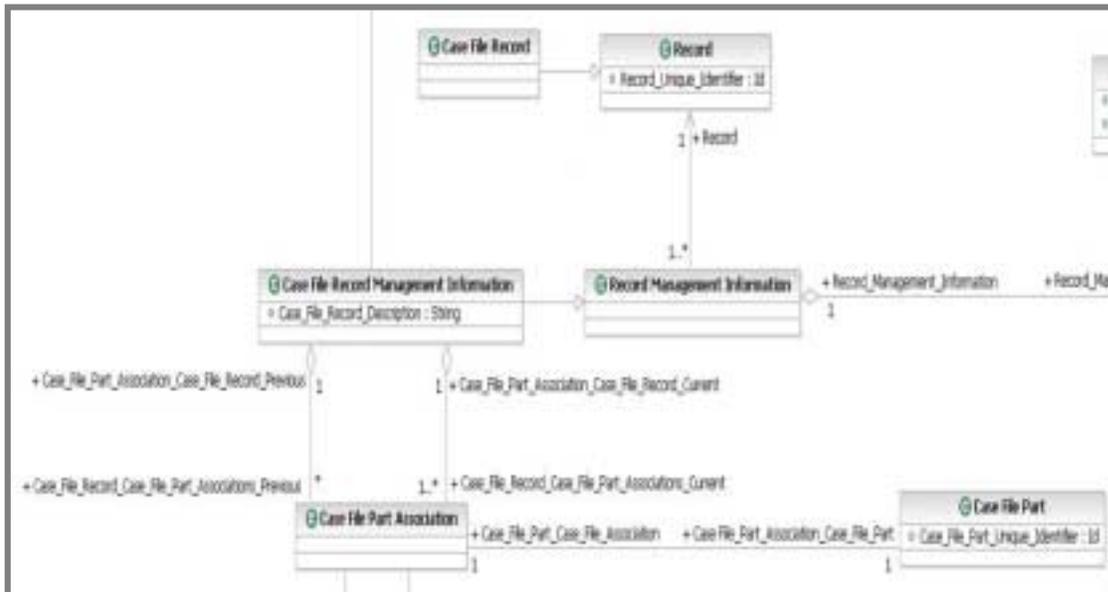


Figure 1: Case File Part Association

Despite the intention of the authors of the December 7, 2005 report to document the relationship of case file part(s) to a case file record, the functional requirements are not consistent with this intent. Reviewers noted this discrepancy.

Underwood, et.al, of Georgia Tech Research Institute, in their draft report “Analysis of the DoD Mandatory Requirements for a RMA and Comparison of These Requirements with the RMSC Use Cases, January 30, 2006,” note:

There is only one Case_File_Part_Association attribute. Hence, only one record can be associated with a case file. There needs to be either an indexed attribute, e.g.,

Case_File_Part_Association_Unique_Identifier(n),
or a relation

CaseFile(Case_File_Identifier,
Case_File_Part_Association_Unique_Identifier,
Case_File_Part_Association_Date)

to capture multiple parts of a case file.

Additionally, Nancy Allard, Policy and Communications Staff, NARA indicates in her “Comments on the GTRI draft Report, February 23, 2006,” that: “The discussion of Case File Part Associate Use Case on p, 61 [of the GTRI draft report] indicates that something is missing from the RMSC requirements.”

Extensions and clarifications addressing the above comments center on the addition of the (n) and (n+1) notations and alternate flows to support them.

CASE FILE SERVICE – CASE FILE RECORD CAPTURE USE CASE

Purpose

The **Case File Record Capture Use Case** populates records management attributes for a **DECLARED CASE FILE RECORD** that provide evidence of a **RECORD CREATOR** and the date it was set aside,² and ensures it is uniquely identified in the electronic environment – creating a **CAPTURED CASE FILE RECORD** available to be managed.³

The reliability of a record and the ability to manage it over time depend heavily upon capturing evidence about the legitimate user, application or system procedure setting aside the record in the electronic environment at its point of creation and carrying that evidence forward with the record. A record is reliable when created in an electronic environment by a legitimate user, application, or system procedure in accordance with legitimate business rules.⁴

A **MANAGED CASE FILE RECORD** at its point of final aggregation⁵ will usually be managed as a single record but may – by business policies or procedures – have different dispositions for each record or part within the **MANAGED CASE FILE RECORD**.

Functional Requirement(s)

1. The **Record Capture Service** shall provide the capability to populate the **Record_Creator_Unique_Identifier**⁶ attribute when a **DECLARED CASE FILE RECORD** is set aside producing a populated **Record_Creator_Unique_Identifier** attribute.
2. The **Case File Service** shall provide the capability to populate the **Case_File_Record_Unique_Identifier** attribute when a **DECLARED CASE FILE RECORD** is set aside⁷ producing a populated **Case_File_Record_Unique_Identifier** attribute.

² A concept in archival theory and Federal law whereby a person (or a system) determines that the evidence of one or more organization, function, policy, decision, procedure, transaction, or activity is complete enough to be maintained and managed as a record, either for the conduct of current business or for future reference.

³ Society of American Archivists, [A Glossary of Archival and Records Terminology](#), s.v., “reliability;” InterPARES, “Findings on the Preservation of Authentic Electronic records,” pp. 14-19; ISO 15489-2, 4.3.2.

⁴ Society of American Archivists, [A Glossary of Archival and Records Terminology](#), s.v., “reliability;” InterPARES, “Findings on the Preservation of Authentic Electronic records,” pp. 14-19; ISO 15489-2, 4.3.2.

⁵ When business rules indicate no more Case File Parts are to be placed in, taken out, or annotated, the case file is then complete and is subject to its disposition as a record.

⁶ This attribute supports capturing reliability by providing contemporaneous evidence of the person, application, or system procedure setting aside the record in accordance with the business rules.

⁷ A concept in archival theory and Federal law whereby a person (or a system) determines that the evidence of one or more organization, function, policy, decision, procedure, transaction, or activity is complete enough to be maintained and managed as a record, either for the conduct of current business or for future reference.

3. The **Case File Service** shall provide the capability to populate the **Case_File_Record_Capture_Date** attribute using the **SYSTEM DATE** when a **DECLARED CASE FILE RECORD** is set aside producing a populated **Case_File_Record_Capture_Date** attribute.
4. The **Case File Service** shall provide the capability to populate a **Case_File_Record_Description**⁸ attribute when a **Case_File_Record_Unique_Identifier** attribute is populated producing a populated **Case_File_Record_Description** attribute.
5. The **Case File Service** shall provide the capability to make available for output all data populating the attributes created by the **Case File Record Capture Use Case**.⁹

Actor(s)

1. User – An individual authorized to use the system.
2. Information System – An organized set of procedures and/or techniques designed to store, retrieve, manipulate, analyze, and display information.
3. Application – A piece of software that performs a function; a computer program.

Precondition(s)

1. A **DECLARED CASE FILE RECORD** is available.

Main Flow

1. An Actor is aware a **DECLARED CASE FILE RECORD** is available.
2. Populate the **Case_File_Record_Unique_Identifier** attribute.
3. Populate the **Case_File_Record_Capture_Date** attribute.
4. Populate the **Case_File_Record_Description** attribute.
5. A **MANAGED RECORD** with populated **Case File Service** attributes is available to be managed.
6. Make available all data populating all attributes of the **Case File Record Capture Use Case**.¹⁰

Sub Flow(s) – None

Alternate Flow(s) – None

⁸ This requirement supports the business need to provide additional information necessary to manage a Case File.

⁹ This requirement supports printing, viewing, saving, report writing, audit, etc. and 44 U.S.C. 2115 (a)(b) Reports; correction of violations and 44 U.S.C. 3106 Unlawful removal, destruction of records

¹⁰ Ibid.

Glossary

1. Captured Case File Record – A uniquely identified declared record carrying the date it was initially controlled as a record within an electronic environment along with the record creator unique identifier.
2. Case File – An aggregating record composed of one or more parts, managed as a single record relating to a specific action, transaction, event, person, place, project, investigation or other subject.¹¹
3. Declared Case File Record – An electronic document or object that is considered by the business owner to evidence one or more organization, function, policy, decision, procedure, transaction, or activity completely enough to be maintained and managed as a record, either for the conduct of current business or for future reference.¹²
4. Managed Case File Record – A sub class of Managed Record that has been set aside by a business, been subject to records management activities, and where individual case file parts are aggregated according to business rules during its active business use.
5. Managed Record – A record as set aside by a business owner that has been subject to records management activities.
6. Record Creator – An individual, application, or system procedure in an electronic environment specifically designed in accordance with the business rules to carry out the legal authorities of the organization to which the individual, application, or system procedure belongs.
7. System Date – The calendar date made available within the electronic environment, usually provided as a service by the operating system for use by programs, applications and other executable operations.

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6. Executive Office of the President of the United States, FY07 Budget Formulation, FEA Consolidated Reference Model Document, May 2005 – <http://www.whitehouse.gov/omb/egov/documents/CRM.PDF>

¹¹ Society of American Archivists, A Glossary of Archival and Records Terminology, s.v., “case file” – “Syn: subject file; transactional file DF: dossier. Case files are sometimes referred to as a project file or, in Canada, a transactional file. Also called dossiers, although that term has a more general sense of file. They are often found in the context of social services agencies (public and private), and Congressional papers.”

¹² Meant to be synonymous with Declare Record in Capture Record Service.

7. Prescott, Hawkins, “Functional Requirements and Attributes for Records Management in a Component-Based Architecture,” RMSC Program Office Technical Report, July 20, 2005
8. 44 U.S.C. § 2115 Reports; correction of violations (a)(b)
9. 44 U.S.C. § 2902 Objectives of records management (1)(2)(3)(4)(5)(6)(7)
10. 44 U.S.C. § 3101 Records management by agency heads; general duties
11. 44 U.S.C. § 3102 Establishment of program of management (1)(2)
12. 44 U.S.C. § 3104 Certifications and determinations on transferred records
13. 44 U.S.C. § 3106 Unlawful removal, destruction of records
14. 44 U.S.C. § 3107 Authority of Comptroller General
15. 44 U.S.C. § 3301 Definition of records
16. 44 U.S.C. § 3303 Lists and schedules of records to be submitted to the Archivist by head of each Government agency
17. 36 CFR Part 1220 -- Federal Records; General Subpart B -- Agency Records Management Programs: §1220.30 Authority
18. 36 CFR §1220.34 Creation of records
19. 36 CFR §1220.36 Maintenance and use of records (a)
20. 36 CFR Part 1222 -- Creation and Maintenance of Federal Records Subpart A -- General §1222.10 Authority
21. 36 CFR §1222.12 Defining Federal records
22. 36 CFR Part 1222 -Subpart C -- Standards for Agency Recordkeeping Requirements §1222.50 Records maintenance and storage
23. 36 CFR §1234.24 Standards for managing electronic mail records

CASE FILE SERVICE – CASE FILE PART ASSOCIATE USE CASE

Purpose

The **Case File Part Associate Use Case** provides for uniquely identifying relationships between a **MANAGED CASE FILE RECORD** and a **CASE FILE PART**.¹³ A **MANAGED CASE FILE RECORD** is usually managed as a single record but may – by business policies or procedures – have different dispositions for each **CASE FILE PART** within the **MANAGED CASE FILE RECORD**. A **MANAGED CASE FILE RECORD** at its point of final aggregation¹⁴ will usually be managed as a single record. The **Case File Part Associate Use Case** supports the concept of associating a single **CASE FILE PART** to one or more **MANAGED CASE FILE RECORD**.

The **Case File Part Associate Use Case** provides the ability to link items related because of a business act, transaction, case, investigation, etc. to form a **MANAGED CASE FILE RECORD**.¹⁵ The **Case File Part Associate Use Case** supports the creation of a **MANAGED CASE FILE RECORD** – the aggregation shows evidence of activities related to a common business activity usually taking place over time. Examples would be personnel file, court case file, medical record, dental record, training record, etc.

Functional Requirement(s)

1. The **Case File Service** shall provide the capability to populate a **Case_File_Part_Association_Unique_Identifier(n)**¹⁶ attribute creating a unique relationship between a **CASE FILE PART** and the **MANAGED CASE FILE RECORD** producing a populated **Case_File_Part_Association_Unique_Identifier(n)** attribute.
2. The **Case File Service** shall provide the capability to populate a **Case_File_Part_Association_Date(n)** attribute using the **SYSTEM DATE** when a **Case_File_Part_Association_Unique_Identifier(n)** attribute is populated producing a populated **Case_File_Part_Association_Date(n)** attribute.
3. The **Case File Service** shall provide the capability to de-populate a **Case_File_Part_Association_Unique_Identifier(n)** attribute creating a unique relationship between a **CASE FILE PART** and the **MANAGED CASE FILE RECORD** producing a de-populated **Case_File_Part_Association_Unique_Identifier(n)** attribute.

¹³ Case File Part is used as a neutral term without engaging in the debate whether items in a Case File are considered documents or records.

¹⁴ When business rules indicate no more Case File Parts are to be placed in, taken out, or annotated, the case file is then complete and is subject to its disposition as a record.

¹⁵ Not addressed here is the debate whether the items in a case file are to be considered documents or records. The use case supports the business activity of handling the case file with all its “parts” under one disposition and if appropriate and in accordance with business rules allows dispositions to be applied to discrete items in the case file.

¹⁶ (n) indicates the first instance of an attribute.

4. The **Case File Service** shall provide the capability to de-populate a **Case_File_Part_Association_Date(n)** attribute using the **SYSTEM DATE** when a **Case_File_Part_Association_Unique_Identifier(n)** attribute is populated producing a de-populated **Case_File_Part_Association_Date(n)** attribute.
5. The **Case File Service** shall provide the capability to make a **CASE FILE PART** and its attributes available for destruction when the **Case_File_Part_Associate_Unique_Identifier(n)** and the **Case_File_Part_Association_Date(n)** attributes of the **CASE FILE PART** have been de-populated.
6. The **Case File Service** shall provide the capability to populate a **Case_File_Part_Association_Unique_Identifier(n+1)**¹⁷ attribute creating a unique relationship between a **CASE FILE PART** and the **MANAGED CASE FILE RECORD** producing a populated **Case_File_Part_Association_Unique_Identifier(n+1)** attribute.
7. The **Case File Service** shall provide the capability to populate a **Case_File_Part_Association_Date(n+1)** attribute using the **SYSTEM DATE** when a **Case_File_Part_Association_Unique_Identifier(n+1)** attribute is populated producing a populated **Case_File_Part_Association_Date(n+1)** attribute.
8. The **Case File Service** shall provide the capability to de-populate a **Case_File_Part_Association_Unique_Identifier(n+1)** attribute creating a unique relationship between a **CASE FILE PART** and the Case File Record producing a de-populated **Case_File_Part_Association_Unique_Identifier(n+1)** attribute.
9. The **Case File Service** shall provide the capability to de-populate a **Case_File_Part_Association_Date(n+1)** attribute using the **SYSTEM DATE** when a **Case_File_Part_Association_Unique_Identifier(n+1)** attribute is populated producing a de-populated **Case_File_Part_Association_Date(n+1)** attribute.
10. The **Case File Service** shall provide the capability to make a Case File Part and its attributes available for destruction when the **Case_File_Part_Associate_Unique_Identifier(n+1)** and the **Case_File_Part_Association_Date(n+1)** attributes of the Case File Part have been de-populated.
11. The **Case File Service** shall provide the capability to make available for output all data populating the attributes created by the **Case File Part Associate Use Case**.¹⁸

¹⁷ (n+1) indicates subsequent instances of an attribute after (n) has occurred.

¹⁸ This requirement will support printing, viewing, saving, report writing, audit, etc. and 44 U.S.C. 2115 (a)(b) Reports; correction of violations and 44 U.S.C. 3106 Unlawful removal, destruction of records.

Actor(s)

1. User – An individual authorized to use the system.
2. Information System – An organized set of procedures and/or techniques designed to store, retrieve, manipulate, analyze, and display information.
3. Application – A piece of software that performs a function; a computer program.

Precondition(s)

1. A **MANAGED CASE FILE RECORD** with populated **Case File Service** attributes is available.

Main Flow

1. An Actor becomes aware a **Case_File_Part_Association_Unique_Identifier(n)** needs to be created.
2. Populate a **Case_File_Part_Association_Unique_Identifier(n)** attribute.
3. Populate a **Case_File_Part_Association_Date(n)** attribute.
4. A **MANAGED RECORD** with populated **Case File Service** part association attributes is available to be managed.
5. Make available all data populating all attributes of the **CASE FILE PART Associate Use Case**.¹⁹

Sub Flow(s) – None

Alternate Flow 1: Support Multiple Instances of Case File Part Association.

1. If at 1 Main Flow (n) first instance has occurred, then:
2. Populate **Case_File_Part_Association_Unique_Identifier(n+1)** attribute.
3. Populate **Case_File_Part_Association_Date(n+1)** attribute.
4. Repeat 2 and 3 Alternate Flow: Support Multiple Instances of **CASE FILE PART Association** until all required associations are complete.
5. Return to 4 Main Flow.

Alternate Flow 2: Disassociate First (n) Case File Part

1. If at Main Flow 1: A **CASE FILE PART (n)** is not being created but instead a **CASE FILE PART (n)** needs to be de-associated from the **MANAGED CASE FILE RECORD**.
2. De-Populate the **Case_File_Part_Association_Unique_Identifier(n)** attribute for the **CASE FILE PART**.
3. De-Populate the **Case_File_Part_Association_Date(n)** attribute for the **CASE FILE PART**.
4. Make the **CASE FILE PART** and its attributes available for disposition.²⁰
5. Return to 4 Main Flow.

¹⁹ Ibid.

²⁰ Business rules will dictate whether the null value attribute will be left associated, removed from association, or destroyed.

Alternate Flow 3: Disassociate (n+1) Case File Parts

1. If at Main Flow 1: A **CASE FILE PART** (n+1) is not being created but instead a **CASE FILE PART** (n+1) needs to be de-associated from the **MANAGED CASE FILE RECORD**.
2. De-Populate the **Case_File_Part_Association_Unique_Identifier(n+1)** attribute for the **CASE FILE PART**.
3. De-Populate the **Case_File_Part_Association_Date(n+1)** attribute for the **CASE FILE PART**.
4. Repeat 2 and 3 Alternate Flow: Disassociation (n+1) Case File Parts until all required disassociations are complete.
5. Make the **CASE FILE PART** and its attributes available for disposition.²¹
6. Return to 4 Main Flow.

Glossary

1. Case File – An aggregating record composed of one or more parts, managed as a single record relating to a specific action, transaction, event, person, place, project, investigation or other subject.²²
2. Case File Part – An individual item (e.g., document, file, record) that with others makes up the Case File.
3. Case File Record – An electronic document or object that is considered by the business owner to evidence one or more organization, function, policy, decision, procedure, transaction, or activity completely enough to be maintained and managed as a record, either for the conduct of current business or for future reference.²³
4. Managed Case File Record – A sub class of Managed Record that has been set aside by a business, been subject to records management activities, and where individual case file parts are aggregated according to business rules during its active business use.
5. Managed Record – A record as set aside by a business owner that has been subject to records management activities.
6. System Date – The calendar date made available within the electronic environment, usually provided as a service by the operating system for use by programs, applications and other executable operations.

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2. Architecture and Infrastructure Committee, Federal Chief Information Officers Council, Service Component-Based Architectures Version 2.0, June

²¹ Business rules will dictate whether the null value attribute will be left associated, removed from association, or destroyed.

²² Society of American Archivists, A Glossary of Archival and Records Terminology, s.v., “case file” – “Syn: subject file; transactional file DF: dossier. Case files are sometimes referred to as a project file or, in Canada, a transactional file. Also called dossiers, although that term has a more general sense of file. They are often found in the context of social services agencies (public and private), and Congressional papers.”

²³ Meant to be synonymous with Declare Record in Capture Record Service.

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 10. 44 U.S.C. § 3107 Authority of Comptroller General
 11. 44 U.S.C. § 3301 Definition of records
 12. 44 U.S.C. § 3303 Lists and schedules of records to be submitted to the Archivist by head of each Government agency
 13. 36 CFR Part 1220 -- Federal Records; General Subpart B -- Agency Records Management Programs: §1220.30 Authority
 14. 36 CFR §1220.36 Maintenance and use of records (a)
 15. 36 CFR Part 1222 -- Creation and Maintenance of Federal Records Subpart A -- General §1222.10 Authority
 16. 36 CFR §1222.12 Defining Federal records
 17. 36 CFR Part 1222 -Subpart C -- Standards for Agency Recordkeeping Requirements §1222.50 Records maintenance and storage
 18. 36 CFR §1234.24 Standards for managing electronic mail records

APPENDIX A – How to Read a UML Class Model

A UML class model is used to formalize a domain derived from a set of use case – Records Management Services. The model uses an industry accepted notation to make explicit classes, their properties, the relationships between classes, and the nature of those relationships (cardinality). Such a model can also be abstract enough to be comprehensible to domain subject matter experts, but precise enough to service as a specification for actual software.

Understanding UML Class Diagram Symbols and Notations

- Classes are an abstraction representing objects in the environment being described including their properties (attributes).
- Classes are depicted by a rectangle divided into compartments. The name of the class appears centered in the upper compartment. Class attributes appear below the class name in the next compartment with operations in the third compartment.
- Class associations are represented by a line connecting one class to one or more other classes.
- Inheritance is the ability of one class (child class) to inherit the identical functionality of another class (super class), and provide new functionality of its own.

Model cardinality



Indicates an aggregation or “part-of” association between a parent class and a child class. This is indicated by an unfilled diamond at the parent class. This means the child class is not required for the parent class to exist.

1 Indicates no more than one.

0..1 Indicates zero or one.

* Indicates many.

0..* Indicated zero or many.

1..* Indicates one or many.



Indicates a class inherits functionality of a parent class and adds functionality of its own. This is indicated by a non-filled arrow from the inheriting class to the parent class with the arrow at the parent class.



Indicates a one way association in which the class the arrow comes from knows about the class the arrow is pointing to, but the class the arrow is pointing to does not know about the class the arrow is coming from.

