



Whitemarsh
Information Systems Corporation

Section of
Repository Selection & Evaluation
Questionnaire

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2.0

REPOSITORY NAMING AND CONTROL

Can the Repository define the following facilities for each of the repositories under its control:

1. Repository name
2. Repository user names
3. Repository user passwords
4. Security control for concurrent updates
5. Exclusive updates
6. Retrieval only
7. Does the repository allow the setting of defaults for its facilities
8. Can more than one repository be operational under a single operating central version of the repository system
9. Can a repository have named collections and subcollections of Meta Components
10. Can Meta Components be moved from one Meta Component collection to another through a "cut and paste" method without having to perform a complete reentry
11. Can duplicate repository names be allowed
12. Can duplicate repository names be prohibited
13. Is the date of creation stored in every Meta Component instance
13. Is the date of last change stored in the Meta Component instance
14. Can an author or project identifier be automatically stored in the Meta Component instance
15. Can a version number be stored in the Meta Component instance



16. Can a version number be automatically created and incremented when a new instance of Meta Component is stored





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3.0

REPOSITORY DEFINITION

3.1 Meta Component Definitions

Can the following be defined for each Meta Component :

1. Name
2. Version
3. Author
5. Description

3.2 Meta Component Classes

1. Name
2. Version
3. Author
5. Description
6. Can the Meta Attribute definitions for each Meta Component class be automatically enforced on all member meta class components

3.2 Meta Component Collections (templates)

1. Name
2. Version
3. Author
5. Description
6. Can an arbitrary set of Meta Components be assigned to a Meta Component collection



7. Can a Meta Component be restricted to belong to only one Meta Component collection
8. Can a Meta Component be allowed to belong to multiple Meta Component collections
9. Are there any restrictions as to the types of Meta Components that can belong to a Meta Component collection
10. Once a Meta Component collection has been defined, can the Repository DBA prevent its modification by end-users

3.3 Analytic Definition

3.3.1 Meta Attributes

3.3.1.1 Meta Attribute Naming

1. Can Meta Attribute names be at least 18 characters
2. Can a Meta Attribute name contain any ASCII character
3. Can a Meta Attribute reference a Meta Attribute domain, relieving the DBA from having to define the characteristics of the Meta Attribute's meta data
4. Can duplicate Meta Attribute names be allowed
5. Can duplicate Meta Attribute names be prohibited
6. Is the date of creation stored in the Meta Attribute component instance
7. Is the date of last change stored in the Meta Attribute component instance

3.3.1.2 Meta Attribute Structures

1. Can a Meta Attribute be defined that can store only a single value, known as a single valued Meta Attribute
2. Can a Meta Attribute be defined that can store multiple discrete data values, known as a multi-valued Meta Attribute
3. Can a Meta Attribute be defined that can store a single set of discrete Meta Attribute values, known as a Meta Attribute group



4. Can a Meta Attribute be defined that stores discrete sets of Meta Attribute values, known as a Meta Attribute repeating group
5. Can a Meta Attribute repeating group be defined that contains a multi-valued Meta Attribute
6. Can a Meta Attribute repeating group be defined that contains a Meta Attribute group
7. Can a Meta Attribute repeating group be defined that contains Meta Attribute repeating group

3.3.1.3 Meta Attribute Data Types

Can the Meta Attribute store the following data value types:

1. Fixed length character
2. Variable length character
3. Logical
4. Fixed decimal
5. Integer
6. Packed decimal
7. Float, single precision
8. Float, double precision
9. Complex
10. Date
11. Time
12. Money
13. Is there a maximum size or value for each Meta Attribute data type



3.3.1.4 Meta Attribute Editing and Validation

Can the repository support automatic data editing and validation clauses with the following features:

1. Specify valid values
2. Specify invalid values
3. Specify ranges of valid or invalid values
4. Specify combinations of valid and invalid values
5. Does the repository description clause recognize the difference between the Meta Attribute character data type value of blank or a Meta Attribute numeric data type value of zero, and a Meta Attribute that has not been valued, i.e., NULL
6. Does the repository description clause support three-way logic for NULLs
7. Does the DBA have the ability to establish default values--other than blank, zero, or NULL--for Meta Attributes that are not valued during an update or insert
8. Once a Meta Attribute has been defined as DATE, are invalid dates automatically rejected whenever data is entered
9. Once a Meta Attribute has been defined as TIME, are invalid times automatically rejected whenever data is entered
10. Is money arithmetic, editing, and rounding automatically performed whenever a MONEY Meta Attribute is utilized
11. Can a Meta Attribute be defined that prohibits NULLs

3.3.2 Meta Entity Definition

Can the following be defined for Meta Entity types:

1. Name
2. Version
3. Author



5. Description
6. Can duplicate Meta Entity names be allowed
7. Can duplicate Meta Entity names be prohibited
8. Is the date of creation stored in the Meta Entity component instance
9. Is the date of last change stored in the Meta Entity component instance
10. Can an arbitrary quantity of Meta Attributes be assigned to Meta Entity types

3.3.3 Meta Relationships

3.3.3.2 Meta Relationship Description

Can the following be defined for each Meta Relationship:

1. Name
2. Version
3. Author
5. Description
6. Can duplicate Meta Relationship names be allowed
7. Can duplicate Meta Relationship names be prohibited
8. Is the date of creation stored in the Meta Relationship component instance
9. Is the date of last change stored in the Meta Relationship component instance

3.3.3.2 Meta Relationship Attributes

1. Can Meta Attributes be defined for Meta Relationships



3.3.3.3 Meta Relationship Types

1. Can the Meta Relationship explicitly allow only one Meta Entity owner instance and exactly one Meta Entity member instance from a different Meta Entity type
2. Can the Meta Relationship explicitly allow only one Meta Entity owner instance from one Meta Entity type and multiple Meta Entity member instances from a single, but different Meta Entity type
3. Can the Meta Relationship explicitly allow only one Meta Entity owner instance from one Meta Entity type and multiple Meta Entity member instances from multiple, but different Meta Entity types
4. Can the Meta Relationship explicitly allow only one Meta Entity owner instance from one Meta Entity type and multiple Meta Entity member instances from the same Meta Entity type
5. Can the Meta Relationship explicitly allow multiple Meta Entity instances from the same Meta Entity type without their having to be an owner Meta Entity type
6. Can the Meta Relationship explicitly allow multiple Meta Entity instances from different Meta Entity type without their having to be an owner Meta Entity type
7. Can the cardinality of a meta-relationship that connects meta components other than Meta Relationships be specified as zero, one, or more such that the cardinality is automatically enforced by the repository system\

3.3.3.4 Meta Relationship Referential Integrity

1. Can the Meta Relationship clauses explicitly declare that a Meta Relationship instance, once it belongs to the repository, cannot be deleted unless it is no longer related to any other Meta Relationship instance
2. Can the Meta Relationship clauses explicitly declare that a Meta Relationship instance, once it belongs to the repository, can be deleted, notwithstanding its relationships to other Meta Relationship instances
3. Can the Meta Relationship clauses explicitly declare that a Meta Relationship instance, upon its storage into the repository, can be related to no other Meta Relationship instance until it is connected to a Meta Relationship



4. Can the Meta Relationship clauses explicitly declare that a Meta Relationship instance, upon its storage into the repository, can be automatically connected to all other Meta Relationship instances to which it is related
5. Can the Meta Relationship clauses explicitly declare that a Meta Relationship instance and all its descendent sets of Meta Relationship instances be all deleted if the owner Meta Relationship instance is deleted
6. Can the cardinality of a Meta Relationship be specified such that it is automatically enforced by the repository system.

3.4 Graphical Definition

3.4.1 Meta Entity Icons

1. Can a Meta Entity type be represented as a graphical icon
2. Can a Meta Entity icon conform to repository-administrator created graphical shapes
3. Can a Meta Entity icon be arbitrary colors
4. Can the location of source-relationship icon attachments be specified on specific locations or areas of the source icon
5. Can the location of target-relationship icon attachments be specified on specific locations or areas of the target icon

3.4.2 Relationship Icons

1. Can a relationship Meta Entity type be represented as a relationship icon
2. Can a Meta Relationship icon conform to various line-types such as dotted, dashed, dashed & dotted, etc
3. Can a Meta Relationship icon be annotate with cardinality
4. Can a Meta Relationship icon be annotate with a relationship name



5. Can a Meta Relationship icon be annotated with a relationship name at either end of the relationship icon
6. Can a Meta Relationship icon name be positioned
7. Can a Meta Relationship icon be annotated with a relationship name
8. Can the graphical representation of the source-end of the relationship-icon take-on an arbitrary graphical representation
9. Can the graphical representation of the target-end of the relationship-icon take-on an arbitrary graphical representation
10. Can the graphical representation of the source-end of the relationship-icon be a composite of more than one arbitrary graphical representation
11. Can the graphical representation of the target-end of the relationship-icon be a composite of more than one arbitrary graphical representation

3.4.3 Diagrams

1. Can a Meta Entity that is represented as a graphical-icon be a diagram
2. Can an arbitrary quantity of Meta Entity icons and Meta Relationship icons be identified as belonging to a diagram
3. Can the commit-to-the-repository strategy for a diagram's contents be specified
4. Can meta-entities icons that have been designated as diagrams be assigned to diagrams

