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| Florida department of transportation |
| Naming Conventions |
| Physical Object Naming |
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| **Data Administration** |
| **11/5/2013** |

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| Document the naming conventions used for physical objects in Florida Department of Transportation (FDOT) data models and databases. |

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# Purpose

Documentation of the naming standards and conventions for physical objects in Florida Department of Transportation (FDOT) data models and databases.

# References

Naming Conventions – Attributes, Columns and Elements

# Definitions

**Artifact** – Something that a naming convention has been established for. The word artifact is used, when you might expect to see the word object, in order to not confuse an object that is something with a name and an object that is a type of something in an Object Relational database.

# Naming Component Notation

The notation symbols for each component of a name are identified in the table below:

|  |  |
| --- | --- |
| **Notation Symbol** | **Component Name** |
| [A] | Artifact Type, e.g. table, view, tablespace, index, … |
| [C] | Content grouping. The default for the content grouping value is the three (3) character application system acronym or prefix. |
| [E] | Environment Type, e.g. DB2, Oracle, Microsoft SqlServer |
| [L] | Lifecycle identifier or sub-grouping of the [C] content grouping component. |
| [N] | A number in the range 001 to 999 that is assigned to an artifact. This number may or may not be sequentially assigned. |
| [S] | A sequentially assigned number in the range 01 to 99 or 001 to 999 that is used to provide uniqueness to the artifact name. |
| [T] | View/access type for SAS. |

# Artifact Type Codes

The complete list of artifact type codes in order by type code value.

|  |  |  |
| --- | --- | --- |
| **Artifact Type Code** | **Artifact Type Name** | **Artifact Name Maximum Length** |
| -- | Attribute\* | 32 |
| -- | Column\* | 18 |
| -- | Entity | 32 |
| -- | Focus Master\*\* | 8 |
| CK | Check Constraint | 18 |
| D | Default Value Constraint | 18 |
| F | Flat, Fixed or Standard File | 8 |
| G | Trigger | 18 |
| I | Oracle Index Tablespace | 8 |
| J | Multi-table Joined Master | 8 |
| K | Package | 18 |
| M | Oracle Materialized View | 18 |
| N | Function | 18 |
| Q | Sequence | 18 |
| R | Procedure | 18 |
| T | Table | 18 |
| TS | Tablespace | 8 |
| V | View | 18 |
| X | Index | 8 |

\* See the **Naming Conventions – Attributes, Columns and Elements** procedure for Attribute and Column naming.

\*\* See the **FOCUS and EDA Master/Access File** section for Focus Master naming.

# Global Rules

1. When the same name exists in multiple schema it must represent the same thing. PSET002\_PSEE\_PROJ cannot be a table in one schema and a view in another schema.

# Base or Standard Name

**Format**

A basic name is composed of a content group, artifact type, number and additional descriptive text up-to the maximum character length of the artifact type. The format is: [CCC][A][NNN][\_][xxx].

**Rules**

1. [A] is defined in the table below, in order by artifact type name:

|  |  |  |
| --- | --- | --- |
| **Artifact Type Code** | **Artifact Type Name** | **Artifact Name Maximum Length** |
| CK | Check Constraint | 18 |
| D | Default Value Constraint | 18 |
| F | Flat, Fixed or Standard File | 8 |
| N | Function | 18 |
| I | Oracle Index Tablespace | 8 |
| M | Oracle Materialized View | 18 |
| K | Package | 18 |
| R | Procedure | 18 |
| Q | Sequence | 18 |
| T | Table | 18 |
| TS | Tablespace | 8 |
| G | Trigger | 18 |
| V | View | 18 |

1. [NNN] is three (3) digits long in the range 001 to 999.
2. [\_] is a required underscore character.
3. [xxx] is text which further describes the artifact being named up to the maximum length for the artifact.
4. The base name, 1st seven (7) characters, for all artifacts in this group must be unique within any given schema.
5. Each artifact in this group must represent the same thing in all schema where the name is found, i.e. a name cannot be a trigger in one schema, a check constraint in a 2nd schema and a procedure in a 3rd schema. If it is a trigger in one schema then it is a trigger in all schema where the name is found.
6. Tables
   1. If a Table exists in multiple schema then it must have the same name and represent the same data in all schema where it is found. Conversely, all tables that have the same name must represent the same data regardless of schema. Minor differences in structure may exist in test schema as changes to the structure are promoted to production environments, i.e. TVIT003\_OUT\_ACCT cannot be a Vendor table in DB2 and a Project table in Oracle. It must be a Vendor table in all schema where it is found.
   2. For DB2: the [CCC] and [NNN] name components must be the same for the table and the tablespace that contains the table.
7. Views
   1. The [NNN] component used for a view may or may not have a tie, connection or relation to the underlying table(s) that make up the view. Guideline: for a view against a single table, where no conflict exists with a pre-existing view, use the same number for the view as the underlying table.
   2. If a view exists in multiple schema then it must have the same name and represent the same view of the same data in all schema where it is found. Conversely, all views that have the same name must represent the same view of the same data regardless of schema. Minor differences in structure may exist in test schema as changes to the structure are promoted to production environments, i.e. BMSV001\_PUBLIC cannot be a view of public Bridge data in DB2 and a view of Contract data in Oracle. It must be a view of public Bridge data in all schema where it is found.
   3. For DB2: views are not explicitly associated with databases or tablespaces.
   4. For Oracle: views are explicitly associated with both a database and a tablespace.
8. The Oracle package specification artifact and the package body artifact have the same name. Reference book: Oracle Database 10g, The Complete Reference by **Kevin Loney**, pg 168.
9. Sequences
   1. A sequence will be used for one and only one table.
   2. The [NNN] value for the sequence name must be the same as the [NNN] value for the table name the sequence is used for.

**Examples**

* PSET002\_PSEE\_PROJ - table number 002 for the Project Suite Enterprise Edition (PSE) application further described as containing PSEE Projects.
* TVIT003\_OUT\_ACCT - table number 003 for the Transportation Vendor Information (TVI) application further described as containing Outsider Account information.

**Database Name**

A database name is eight (8) characters long.

## DB2 Database Name

**Format**

A DB2 database name is formatted as [CCC] + “DB2” + [SS].

**Rule**

[SS] is a two (2) digit sequentially assigned number in the range 01 to 99.

## Oracle Database Name

**Format**

An Oracle database name is formatted [CC][L][SS].

**Rules**

1. [CC] represents the district id for the database.
2. [L] is the lifecycle identifier or sub-grouping with example values in the table below:

|  |  |
| --- | --- |
| **Lifecycle or Sub-group** | **Lifecycle or Sub-group Name** |
| PRD | Production |
| TST | System Test |
| UT | Unit Test |

1. [SS] is a two (2) digit sequentially assigned number in the range 01 to 99.
2. Database names are always unique to a DBMS platform and must be unique within the FDOT computing environment.

**Examples**

* RWMDB201 - DB2 database number 01 for the Right of Way Management (RWM) application
* D9PRD21 - District Nine (Central Office) Oracle production database 21

# Master/Access File

## FOCUS and EDA Master/Access File

**Format**

FOCUS and EDA master and access file names are eight (8) characters long formatted as [CCC][E][A][NNN].

**Rules**

1. [E] is defined in the table below:

|  |  |
| --- | --- |
| **Environment Type Code** | **Environment Type Name** |
| D | DB2 |
| F | Flat, Fixed or Standard File |
| O | Oracle |

1. [A] is defined in the table below:

|  |  |
| --- | --- |
| **Artifact Type Code** | **Artifact Type Name** |
| F | Flat, Fixed or Standard File |
| J | Multi-table Joined Master |
| T | Table |
| V | View |

1. [NNN] is a three (3) digit number in the range 001 – 999.
2. A FOCUS/EDA master should have the same [NNN] component value as the underlying object type that it is associated to.
3. The [NNN] component value for a multi-tabled master should have no tie, connection or relation to the underlying tables.
4. Multi-tabled masters are no longer created at FDOT.
5. Each artifact in this group must represent the same thing in all schema where the name is found, i.e. RWMDT001 cannot be a Right-of-Way Management master for table 001 in one schema and a Financial Management master in another schema.

**Examples**

* RWMDT001 – RWM application system, DB2, Table 001
* RWMFF001 – RWM application system, Flat File, Standard File 001
* RWMOV001 – RWM application system, Oracle, View 001

## SAS View/Access File

**Format**

A SAS view name is DB2 specific. It is eight (8) characters long formatted as [CCC][T][A][NNN].

**Rules**

1. [T] is defined in the table below:

|  |  |
| --- | --- |
| **View/Access Type Code** | **Environment Type Name** |
| A | Access Descriptor |
| V | View Descriptor |

1. [A] is defined in the table below:

|  |  |
| --- | --- |
| **Artifact Type Code** | **Artifact Type Name** |
| T | Table |
| V | View |

1. [NNN] is a three (3) digit number in the range 001 – 999.
2. Each artifact in this group must represent the same thing in all schema where the name is found, i.e. RWMVT001 cannot be a Right-of-Way Management SAS view for table 001 in one schema and a Financial Management SAS view in another schema.

**Examples**

* RWMVT001 – RWM application system, view descriptor for table 001
* RWMVV001 – RWM application system, view descriptor for view 001

# Index Name

**Format**

An index name is eight (8) characters long and is formatted as [CCC][A][NNN][S].

**Rules**

1. [A] = “X”
2. [NNN] is a three (3) digit number in the range 001 – 999.
3. [S] is the single character index sequence in the range 1-9 and then A-Z.
4. The value for the [NNN] name component must have the same value as the [NNN] name component for the table that the index is associated to.
5. The value for [S] is equal to “1” for the primary key index.
6. For all other indexes for the table the value is assigned sequentially from the range 2-9 and then A-Z.
7. Each index must represent the same access path in all schema where the name is found including index member order, i.e. If the index member order for RWMX0011 is WPITEM, WPITMSEG, WPPHAZGP in one schema then it must have the same index members and the same index member order in all schema.

**Examples**

* RWMX0011 – RWM application, table 001, primary key
* RWMX0012 – RWM application, table 001, foreign key, unique index or non-unique index.

# Relational Integrity (RI) Rule Name

The same name is used for the relationship name and the foreign key name.

**Format**

An RI Rule name is formatted as [CCC][NNN] [SS].

**Rules**

1. The relationship [NNN] has the same value as the table [NNN] of the table that is the parent of the relationship.
2. [SS] is a two (2) digit sequentially assigned number in the range 01 to 99.
3. Each RI Rule (Relationship) must have the same parent entity and child entity in all schema where the name is found, i.e. PSE00212 cannot relate PSEE PROJECT to PROJECT PERMIT in one schema and relate VENDOR to VENDOR ADDRESS in another schema.
4. Each RI Rule (Relationship) must represent the same business data relationship or business rule in all schema where the name is found, i.e. PSE00212 cannot satisfy the rule that Permits are acquired for Project Suite Projects in one schema and the rule that Vendors have Addresses in another schema.

**Examples**

* RWM00309 - Relationship number 09 for table number 003 belonging to the RWM application system.

# Change History

|  |  |
| --- | --- |
| **Effective Date:** December 1, 2011 |  |
| **Create Date**: November 21, 2011 | **Created By:** Sarah Close |

|  |  |  |
| --- | --- | --- |
| **Last Update Date** | **Last Updated By** | **Reason for Change** |
| November 21, 2011 | Sarah Close | Convert procedure to new format |
| December 7, 2011 | Sarah Close | Update based on initial review comments |
| February 8, 2012 | Sarah Close | Update based on review comments |
| February 2, 2012 | Sarah Close | Updates based on comments. |
| April 13, 2012 | Sarah Close | Include “uniqueness” rules for each object type that needs them. |
| January 30, 2013 | Morgan Bunch | Minor editing changes in preparation for RFQ. |
| November 5, 2013 | Sarah Close | Minor typographical error corrections. |