

Government Asset Identification System

Robert Keady, CEM

GSA-PBS-NCR-Maintenance and
Energy Branch (WPYE)
Building Management Specialist
(202) 708-6874
robert.keady@gsa.gov

Aaron Titus

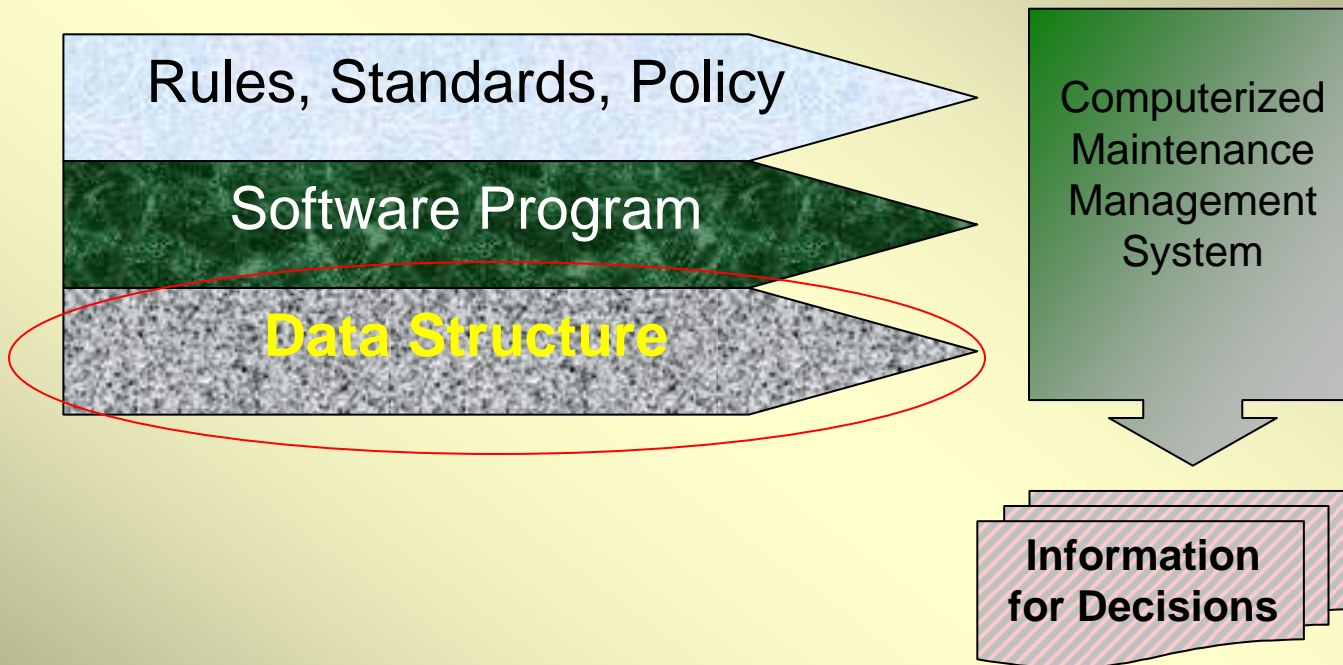
Technical Program Manager
Construction Specifications Institute
Alexandria, VA
(703) 706-4750
atitus@csinet.org

Government Asset Identification System

Transition Government Agency(s) to a
World Class Asset Identification
System based on industry standards.

- Increase efficiency of operations for each facility.
- Consistency between facilities nation wide.
- Improve information available for executive decisions.
- Reduce operational costs.
- Integrate system with advent of new technology.

Government Asset Identification System



- Data Structure is foundation of overall program.
- Software Program is packaged used to manipulate the data
- Rules, Standards, Policy is how the data is required to be manipulated.

GSA Asset Identification System

- Current Asset Identification:
 - Assets are identified in the GSA by preventative maintenance.
 - For example:
 - An air handling unit has an associated GSA Preventative Maintenance Guide Card.
 - That guide card is identified as an A11 PM Guide Card.

A-11 Air Handler Unit

Frequency: Annual

Special Instructions:

1. Schedule shutdown with operating personnel, as needed.
2. Review manufacturer's instructions.
3. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources."
4. Deenergize, lock out and tag electrical circuit(s).
5. Schedule PM on motor per guide M-3, in conjunction with this guide.

Include the following additional special instructions in cases where the air handler is equipped with a direct expansion cooling coil:

6. Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.

GSA Asset Identification System

- Current Asset Identification:
 - The air handler is therefore identified as an A11 and would subsequently be labeled per current convention of:

GSA PM Guide Card Identification + Sequence num + GSA Building ID

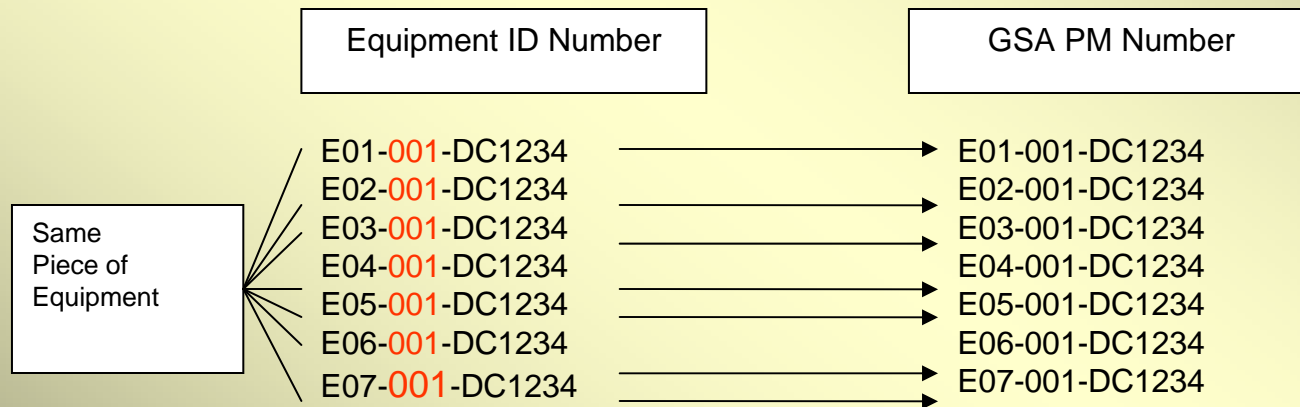
A11-01-DC0000

EQ #	Description	Location
A03-01-DC0021	HUMIDIFICATION SYSTEMS	DC0021-PH-ELEVPH7&8
A04-02-DC0021	AIR COMPRESSOR	DC0021-SB-MECH RM
A11-006-DC0021	AIR HANDLER, 5,001 TO 15,000 CFM	DC0021-7TH-7013A MECHRM
C24-22-DC0021	CONDENSING UNIT REF., COMFORT, UNDER 20 TONS	DC0021-ROOF-B212
D05-17-DC0021	DOOR, MAIN ENTRANCE	DC0021-1ST-1300N.
E01-01-DC0021	ELEVATOR, ELECTRIC OR HYDRAULIC 9FLOORS	DC0021-7TH-7100A
E04-01-DC0021	ELEVATOR, ELECTRIC OR HYDRAULIC 9FLOORS	DC0021-7TH-7100A
E19-091-DC0021	EMERGENCY, LIGHTS CLOSED SYSTEM	DC0021-1ST-1030
F04-05-DC0021	"FIRE CONTROL VALVE 4"+ INTERWATER DISTRIB SYS"	DC0021-SB-MECH RM
F32-0036/0043-DC0021	FILTER, THROW AWAY	DC0021-7TH-7013

GSA - NCR CMMS System

GSA Asset Identification System

- Current Asset Identification:
 - Since all guides are entered as a separate asset in the database:
 - Multiple asset identifications for a single asset.
 - One to one relationship exists between PM and Assets.



EQ #	Description	Location
E41-01-DC0021	EMERGENCY GENERATOR, ELECTRICDIESEL ENGINES	DC0021-BSMT-B221C
E41A-01-DC0021	EMERGENCY GENERATOR, ELECTRICDIESEL ENGINES	DC0021-BSMT-B221C
E42-01-DC0021	EMERGENCY GENERATOR ELECTRIC	DC0021-BSMT-221

GSA Asset Identification System

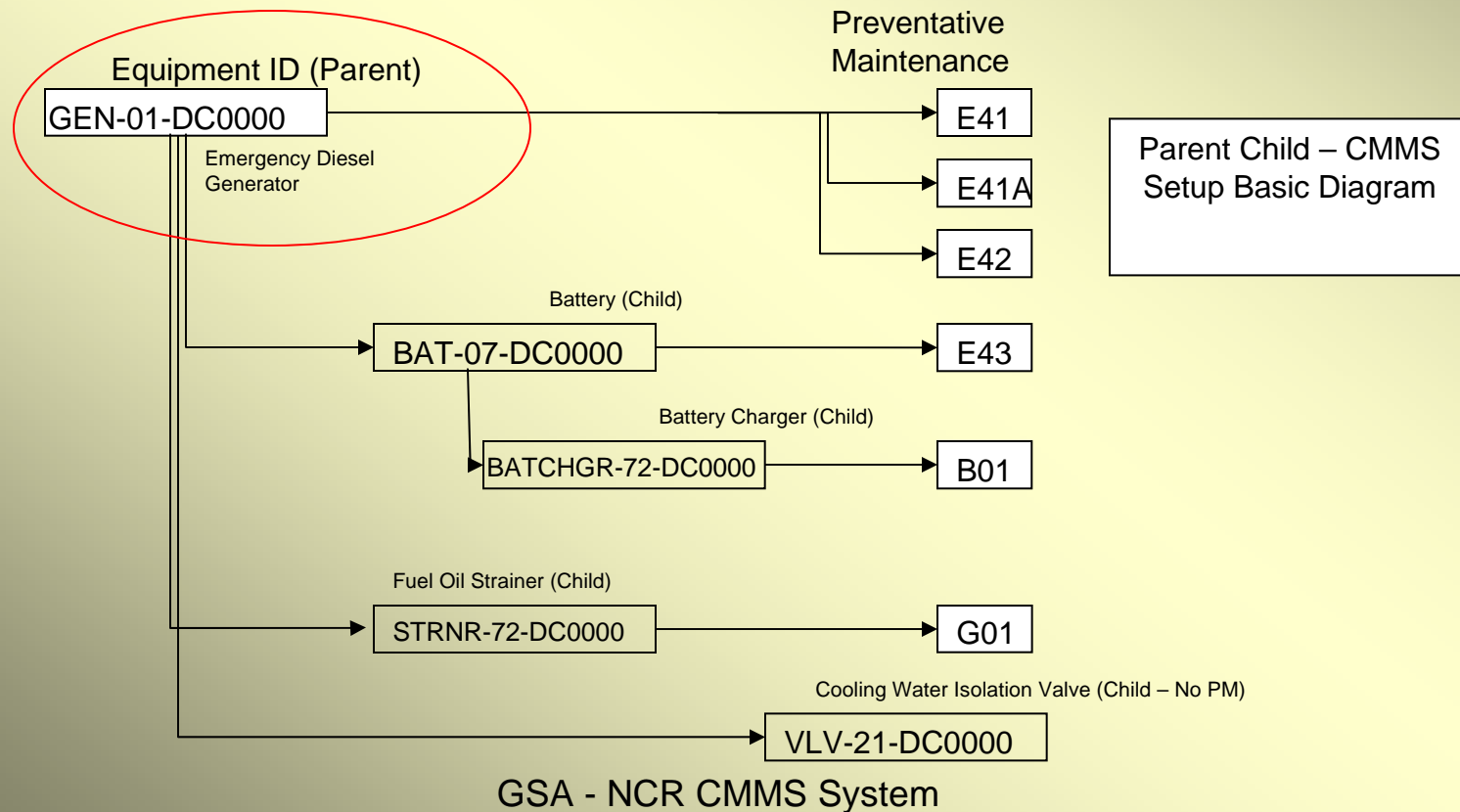
- Current Asset Identification:
 - Disposable assets entered into database (inventory items).
 - For example: An air handler has a filter preventative maintenance guide cards associated with it of: F32.

EQ #	Description	Location
F32-0001/0011-DC0021	FILTER,THROW AWAY	DC0021-7TH-7115A
F32-0012/0017-DC0021	FILTER,THROW AWAY	DC0021-7TH-7115A
F32-0018/0025-DC0021	FILTER,THROW AWAY	DC0021-7TH-7115A
F32-0026/0029-DC0021	FILTER,THROW AWAY	DC0021-7TH-7013
F32-0030/0035-DC0021	FILTER,THROW AWAY	DC0021-7TH-7013
F32-0036/0043-DC0021	FILTER,THROW AWAY	DC0021-7TH-7013
F32-0044/0049-DC0021	FILTER,THROW AWAY	DC0021-7TH-7013
F32-0050/0053-DC0021	FILTER,THROW AWAY	DC0021-7TH-7013
F32-0054/0055-DC0021	FILTER,THROW AWAY	DC0021-7TH-7215

GSA Asset Identification System

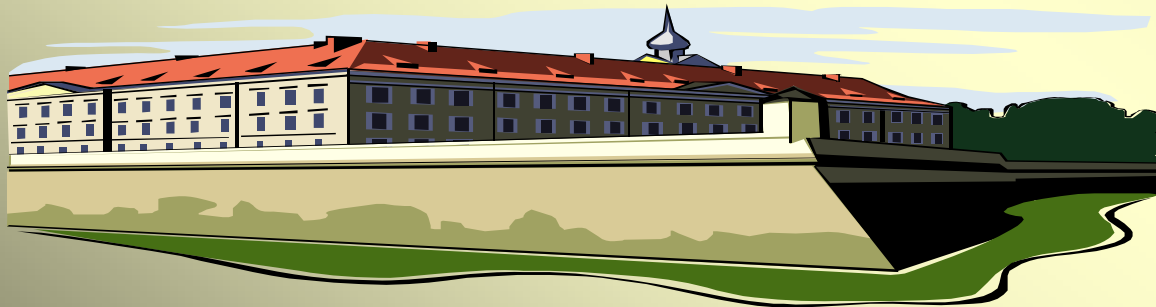
Recommended database setup:

- Single identification per asset not related to guide.
- Separate relationship between equipment module and PM Module.
- All preventative maintenance attached to one asset.
- All assets that are a subcomponent of another asset attached to the parent asset.



GSA Asset Identification System

- Problems related to current system:
 - Preventative maintenance inventories versus a master asset inventory.
 - No repair or service information captured.
 - No interrelating relationships between components.
 - Creation of new preventative maintenance to identify new assets.
 - No consistent metrics to use for decision making.
 - Significant man-hours wasted.



GSA - NCR CMMS System

GSA Asset Identification System

- Problems related to current system:
 - Will not integrate with new and existing technology.
 - Systems not compatible with existing practices in new construction.
 - System not compatible with engineering practices.



GSA - NCR CMMS System

Government Asset Identification System

Data:

Software Program Identification		
Acronym	Sequence Number	Location Identifier
GEN	01	DC0000

Data Identification Key = Reference Map		
Acronym	Description	Encoding
GEN	Power Generator: Emergency: Diesel	12 23 34 16 19 22
AHU	Air Handling Unit: Modular	24 15 16 17 18 18
AHU	Air Handling Unit: Rooftop	24 15 16 17 18 19

- Acronym: Human understanding, blueprints, CAD drawings.
 - Full text is too much information for labeling, etc.
- Description: What that acronym is related to in detail.
- Encoding to differentiate for computer the different assets.

Government Asset Identification System

Schema to identify assets – Phase 1.

- Use National CAD Standards acronyms to identify assets.
 - *Example: M-HVAC-EQPM-AHU*
 - Now an air handler could be identified uniquely as an **AHU**.
AHU – 01- DC0000
- Architects, maintenance engineers, electrical engineers, construction engineers, already use industry standards in development of renovations and construction

United States
National CAD Standard®
A Consensus Standard Incorporating Industry Publications

a product of the
Facility Information Council
— a NIBS Council

ABOUT NCS
IMPLEMENTING
ADOPTERS
FAQ
PRESS
ORDERING
COMMITTEE
CONTACT

CONTRIBUTORS:
National Institute of BUILDING SCIENCES
AIA
CSI

United States National CAD Standard®

The U.S National CAD Standard (NCS) is the only comprehensive U.S. CAD Standard for the design, construction and facility management industries. The program's goal is broad voluntary adoption of the CAD Standard by the building design, construction and operation sectors, thereby establishing a common language for the building design and documentation process. Use of NCS eliminates the overhead costs that organizations now incur to maintain proprietary office standards, train new staff, and coordinate implementation among design team members. The 2-D standard plays a crucial role in easing the transition to new BIM software systems and the 3-D object-based standards represented by the IAI-developed IFCs, or Industry Foundation Classes.

Search

[Ask a Question](#) | [RFI](#)

ORDERING THE NCS

NCS ADOPTERS

GSA
SIMON
SYSKA HENNESSY GROUP

ANNOUNCEMENTS
NCS V4 Amendments Submitted to NCSPC's Vote
(March 14, 2007)

GSA - NCR CMMS System

Government Asset Identification System

Schema to identify assets – Phase 2:

- Cross reference map of CAD acronyms to OmniClass:
 - Digitally encode each building asset.
 - Digital code to be used by engineering and architects in prints and modeling.

23-75 00 00 Climate Control (HVAC)

23-75 05 00 Complete Climate Control Systems

23-75 05 11 Complete Heating Systems
23-75 05 14 Complete Cooling Systems
23-75 05 17 Complete Mechanical Ventilation Systems
23-75 05 21 Complete Air-Conditioning Systems

23-75 10 00 Transformation and Conversion of Energy

23-75 10 11 Central Heat Generators
23-75 10 11 11 Central Heat Generator Components
23-75 10 11 11 11 Central Heat Generator Joint Fillers and Sealants
23-75 10 11 11 14 Thermal Liquid
23-75 10 11 14 Hot Water Heat Generators
23-75 10 11 14 11 Cast-Iron Boilers
23-75 10 11 14 14 Condensing Boilers
23-75 10 11 14 17 Finned Water-Tube Boilers
23-75 10 11 14 21 Firebox Heating Boilers
23-75 10 11 14 24 Flexible Water-Tube Boilers
23-75 10 11 14 27 Pulse Combustion Boilers
23-75 10 11 14 31 Scotch Marine Boilers
23-75 10 11 14 34 Steel Water-Tube Boilers
23-75 10 11 17 Warm Air Heat Generators
23-75 10 11 17 11 Furnaces
23-75 10 11 17 11 11 Electric-Resistance Furnaces
23-75 10 11 17 11 14 Fuel-Fired Furnaces

GSA - NCR CMMS System

Government Asset Identification System

Final Solution:

- Cross Map Reference Objects:

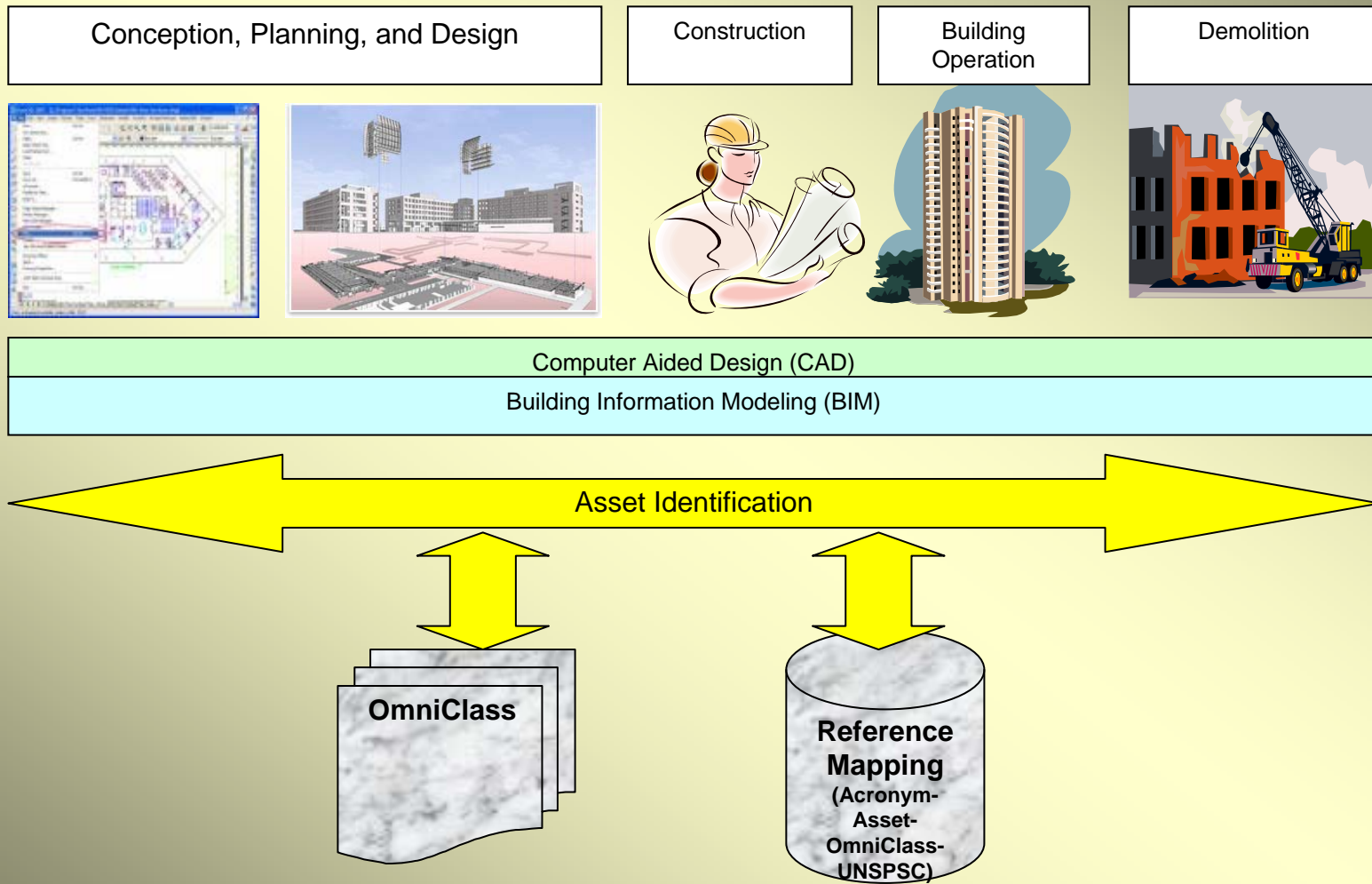
<u>Omni Class</u>	<u>National CAD Standard</u>	<u>Description</u>
23-30-10-21-11	F-PROT-EQPM- FDR	Fire Door
23-75-35-14-11	M-HVAC-EQPM- AHU	Air Handling Unit

- So the equipment would then be labeled:

FDR-01-DC0021

AHU-01-DC0021.

Government Asset Identification System



GSA - NCR CMMS System

Government Asset Identification System

Executive Decision:

Government Agencies redesign database and adopt *National CAD* and *OmniClass* standards to identify their assets to reduce costs, improve information for executive decisions, increase operational efficiency, and integrate facility management with new and existing technologies.

Government Asset Identification System

Questions
or
Comments

GSA - NCR CMMS System