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for Facilities, Infrastructure, and Environment

Tri-Service Spatial Data Standards (TSSDS)
&
Tri-Service Facility Management Standards (TSFMS)
Users

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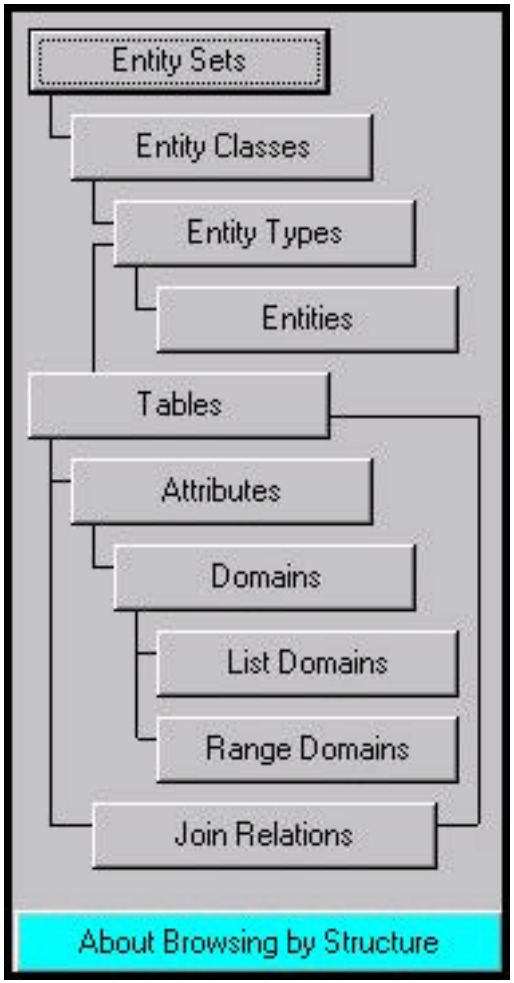
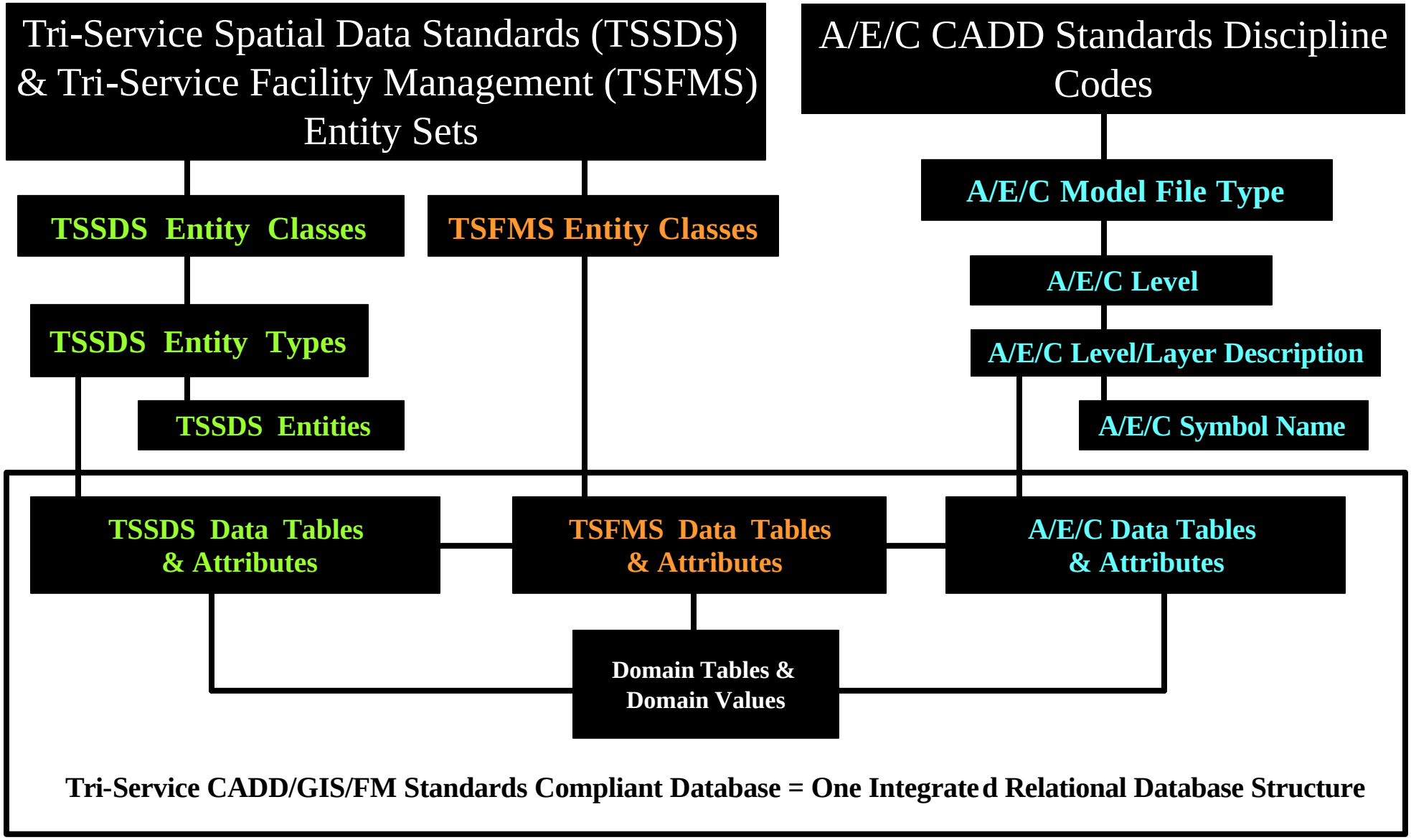
TSSDS/TSFMS Structure

Size and Complexity - Release 1.800



25	Entity Sets
169	Entity Classes
931	Entity Types
4753	Entities
971	Tables
22797	Attributes
811	Domain Tables
19418	List Domain Values
18	Range Domains
7072	Join Relations

Tri-Service CADD/GIS/FM Standards Data Model



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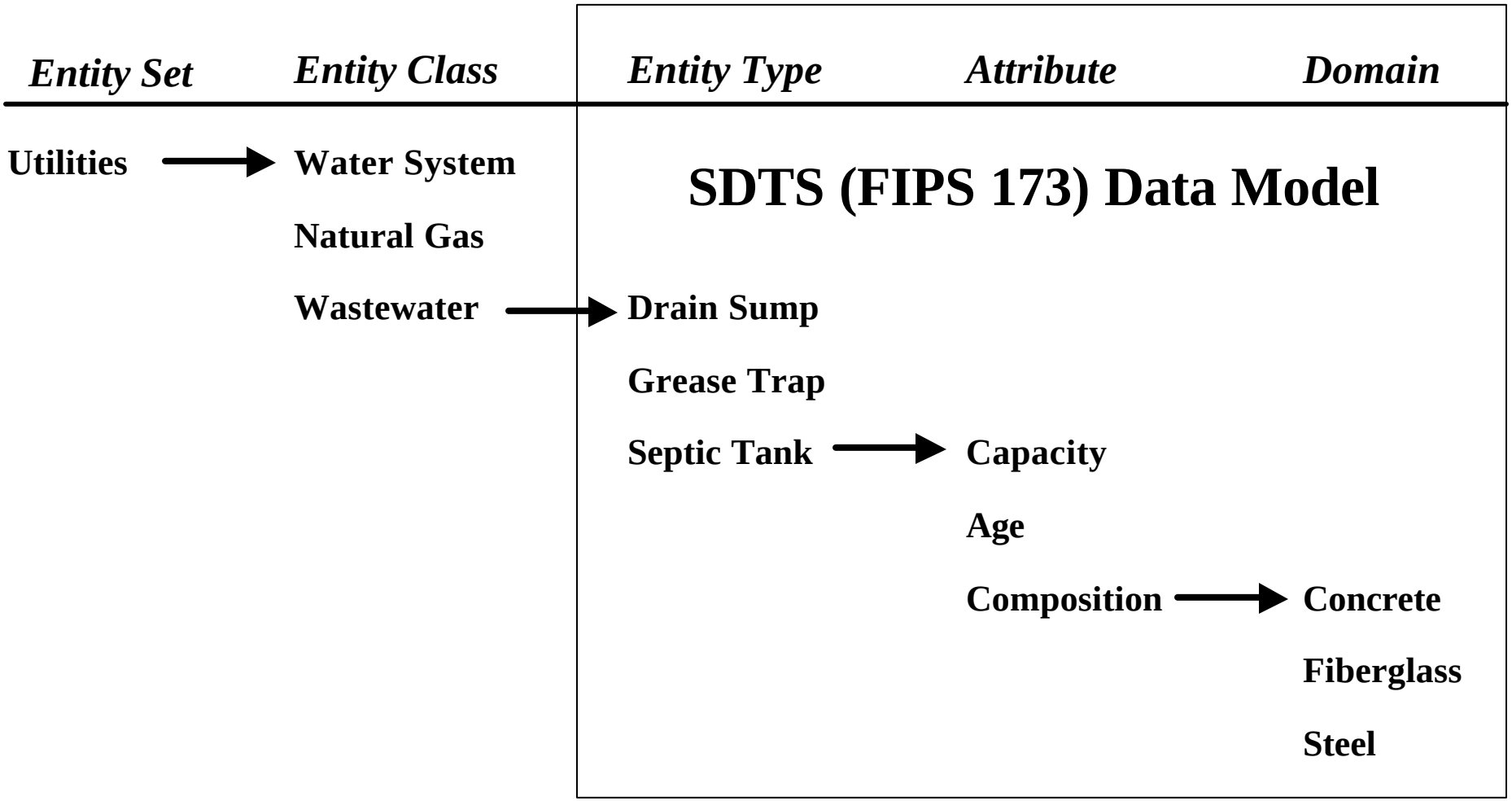
TSSDS Data Model



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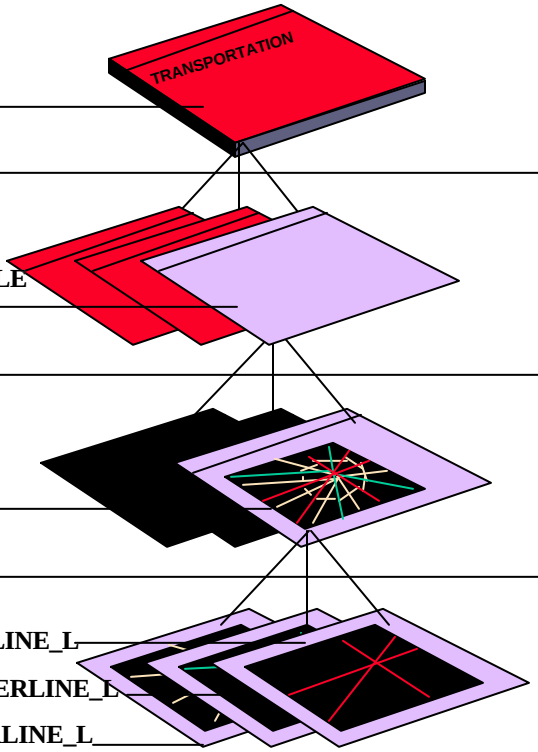
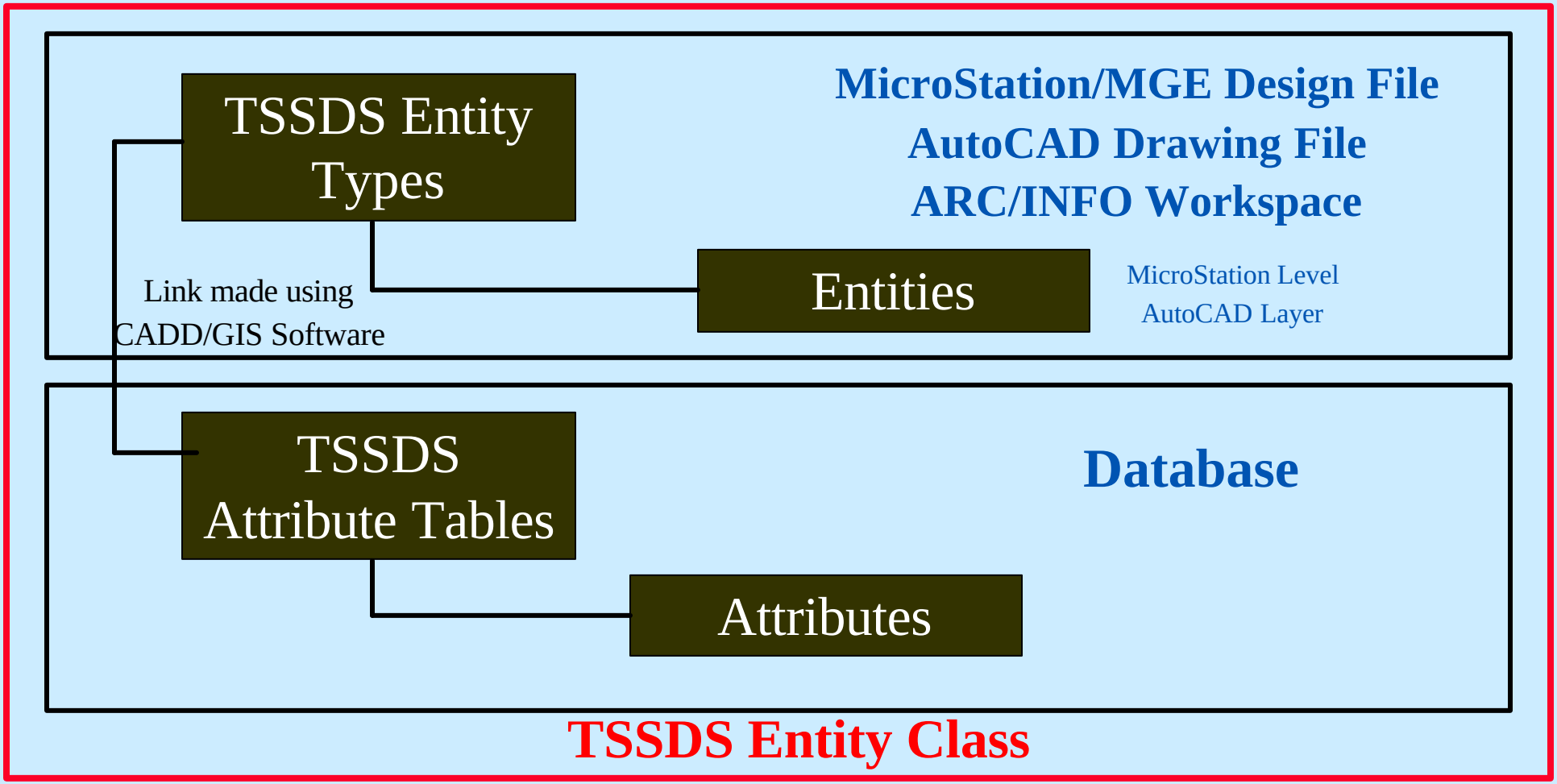
TSSDS Data Model

DATA HIERARCHY	EXAMPLE DATA	GIS		CADD AM/FM	
		MGE	ARC/INFO	MicroStation	AutoCAD
ENTITY SET	TRANSPORTATION	PROJECT LEVEL	PROJECT LEVEL	PROJECT LEVEL	PROJECT LEVEL
ENTITY CLASS	TRANSPORTATION_VEHICLE	CATEGORY AND DESIGN FILE	WORKSPACE	DESIGN FILE	DRAWING FILE
ENTITY TYPE	ROAD CENTERLINE	GROUP BY FEATURES	COVERAGE FILE	GROUP BY LEVEL	GROUP BY LAYER
ENTITY	PRIMARY_ROAD_CENTERLINE_L SECONDARY_ROAD_CENTERLINE_L TERTIARY_ROAD_CENTERLINE_L	FEATURE	SELECT BY ATTRIBUTE	LEVEL	LAYER



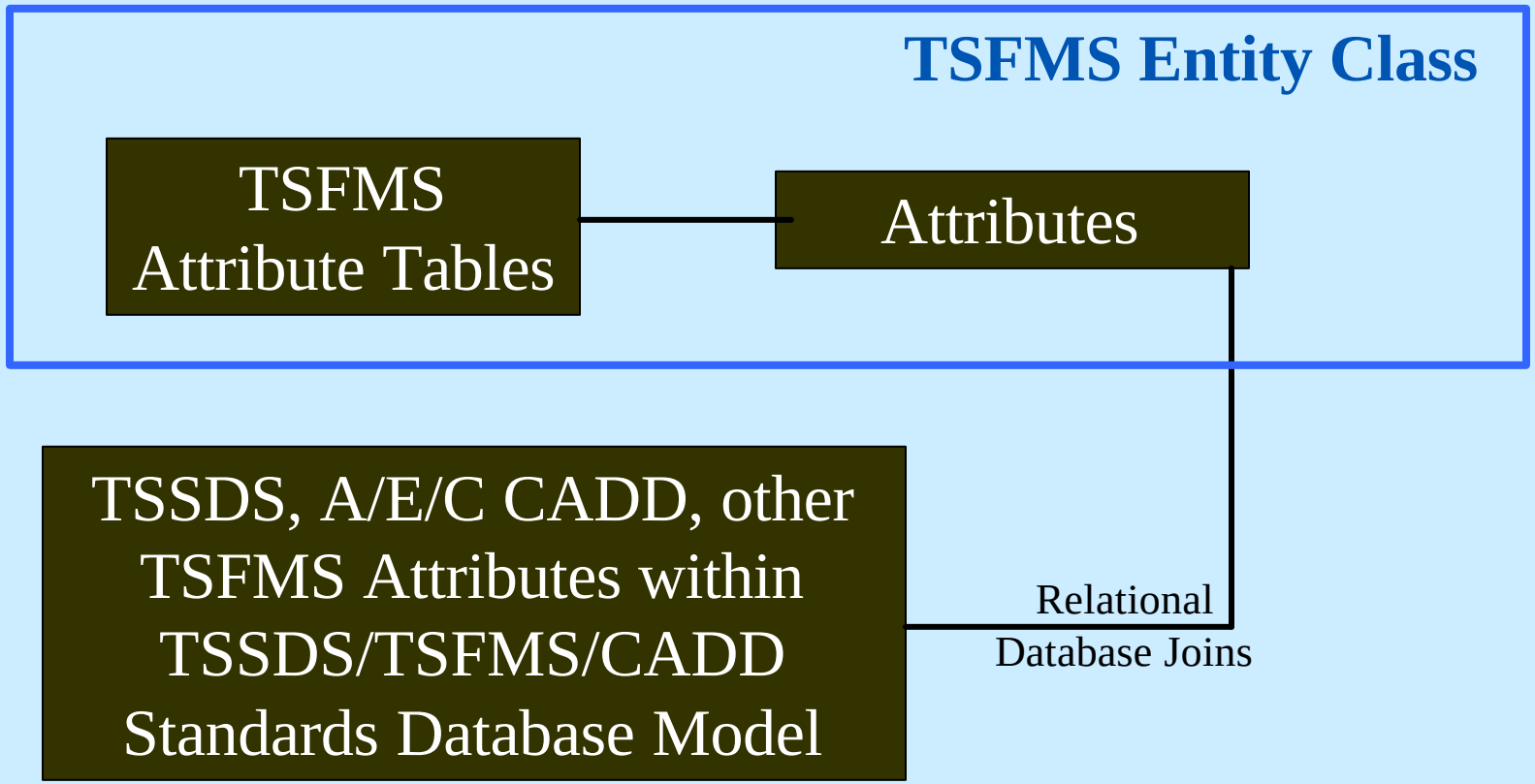
TSSDS Entity Classes

Grouping of geographically referenced (geospatial) features with "attached" Attribute Tables within each Entity Set.



TSFMS Entity Classes

Grouping of related facility management Attribute Tables within each Entity Set. The FM Attribute Tables "business" and event (e.g., inspections, repairs) data related to TSSDS geospatial features and/or A/E/C CADD Objects.



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GIS & FM Technology Users

- **Current Users of GIS & FM technology (and TSSDS & TSFMS) vary greatly in:**
  - **knowledge of GIS/FM/database software**
  - **available funding for GIS & FM**
  - **final products (i.e., what they want from GIS and FM technology.**

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GIS & FM Technology Users

- **"Traditional" -**
  - These users prefer a simple, "flat-file" type database (e.g., Release 1.2).
  - Examples include:
    - Most current web based GIS, FGDC standards, Army MAGIC.
  - Advantages include:
    - Simple to understand.
    - Database tables can be edited via GIS software.
  - Disadvantages include:
    - Large databases
    - Have to key-in names, addresses, feature/attribute metadata, etc. each time, increasing likelihood for errors and more labor intensive.
    - Cannot efficiently handle temporal or event data.

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GIS & FM Technology Users

- **"Intermediate" -**
  - Release 1.80 is based upon a relational database model which is compatible with current GIS & FM technology.
  - The data model is not fully "normalized", primarily for purpose of permitting majority of data entry and editing via GIS software.
  - Requires uploading of appropriate data from information management systems, double-entry of data, or building links between appropriate GIS/FM and information management system data records.

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GIS & FM Technology Users

- **"Transactional" -**
  - Want a fully normalized data model.
  - Data entered in information management system is also directly accessible to GIS and FM systems without uploading.

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Questions???

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