FAA Authoritative Sources

AIXM Web Services

Presented to: AIXM CCB

By: FAA PMO Aeronautical Services

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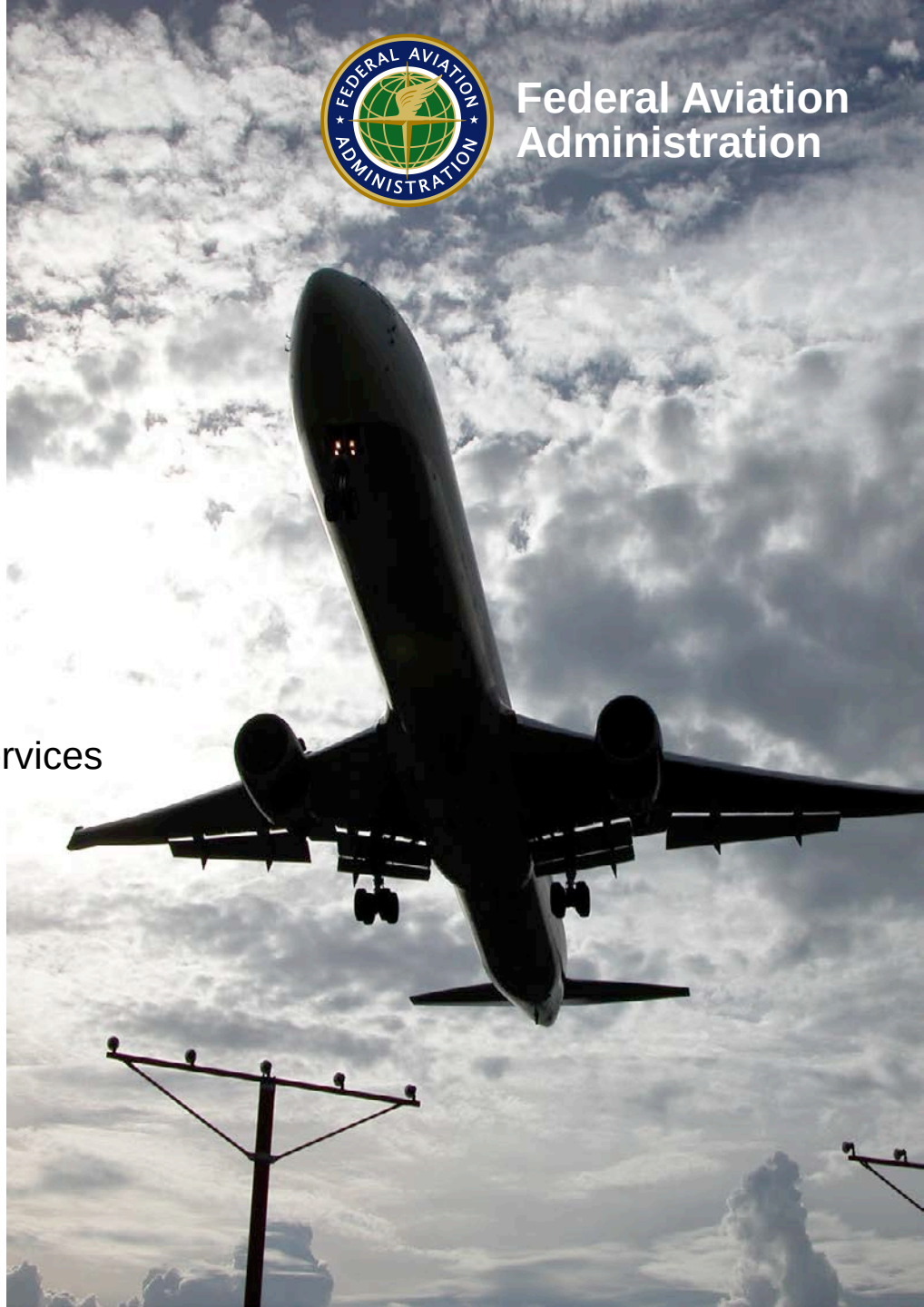
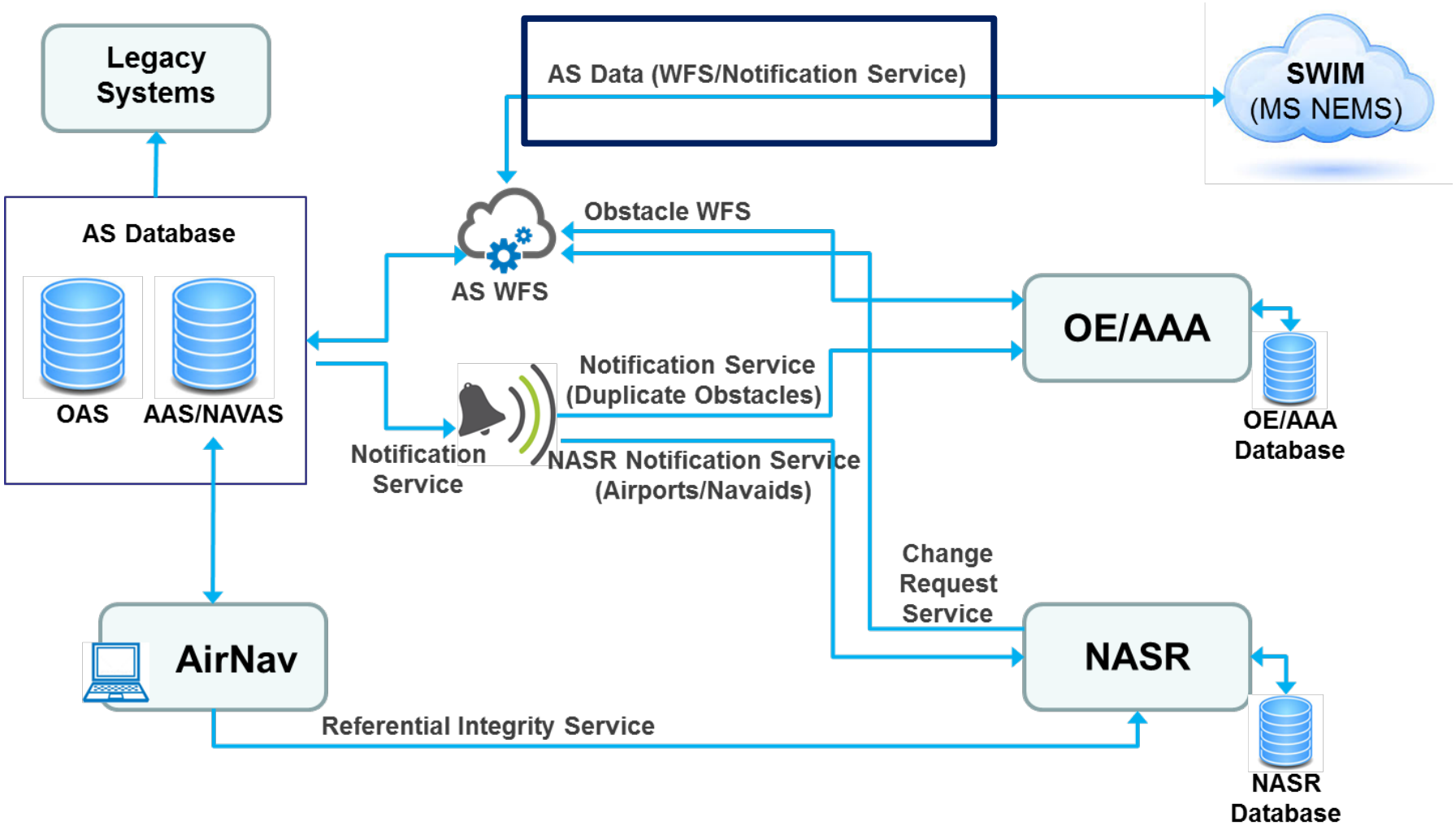


Agenda

- **Authoritative Sources Overview**
- **AIXM 5.1 Web Services**
  - WFS
  - JMS Notification
- **AIXM Features and Extensions**
- **External Access (via SWIM/ACS)**
- **Questions**

Authoritative Sources Overview



AIXM Web Services

- **AIASDataServiceWFS**
  - Provides the capability to query aeronautical data (Obstacles, Airports, NAVAIDs) from FAA authoritative sources (OAS, AAS, and NAVAS)
  - OGC Web Feature Service (WFS)
  - Request/Response Pattern
- **AIASNotification**
  - Interface for publishing/distributing changes to obstacle, airport and NAVAID definitions from FAA authoritative sources (OAS, AAS, and NAVAS)
  - Java Messaging Service (JMS)
  - Publish/Subscribe Pattern

AIASDataServiceWFS

- **Operations:**
  - getFeature
    - allows the user to retrieve AIXM Features via simple request or stored query
  - listStoredQueries
    - lists the stored queries available on AIAS server
      - GetFeatureByBBox
      - GetFeatureSummaryByBBox
      - GetFeatureByIdAndRev
      - GetFeatureByName
      - GetFeatureByCircleSearch
      - GetFeatureByNameAndRev
      - GetFeatureById
  - describeStoredQueries
    - provides detailed meta data for each stored query requested

AIASNotification

- **Operations**
  - AeronauticalChangeFeatureNotification
    - Writes a message containing a new, edited, or deleted obstacle, airport, or NAVAID to a queue
    - Contains a complete aeronautical feature definition as a payload along with message headers. The payload of aeronautical feature is an AIXM Message
    - Message header will indicate the operation that triggered the notification:
      - New Obstacle/Airport/NAVAID
      - Update Obstacle/Airport/NAVAID
      - Dismantle Obstacle
      - Abandon Airport
      - Decommission NAVAID

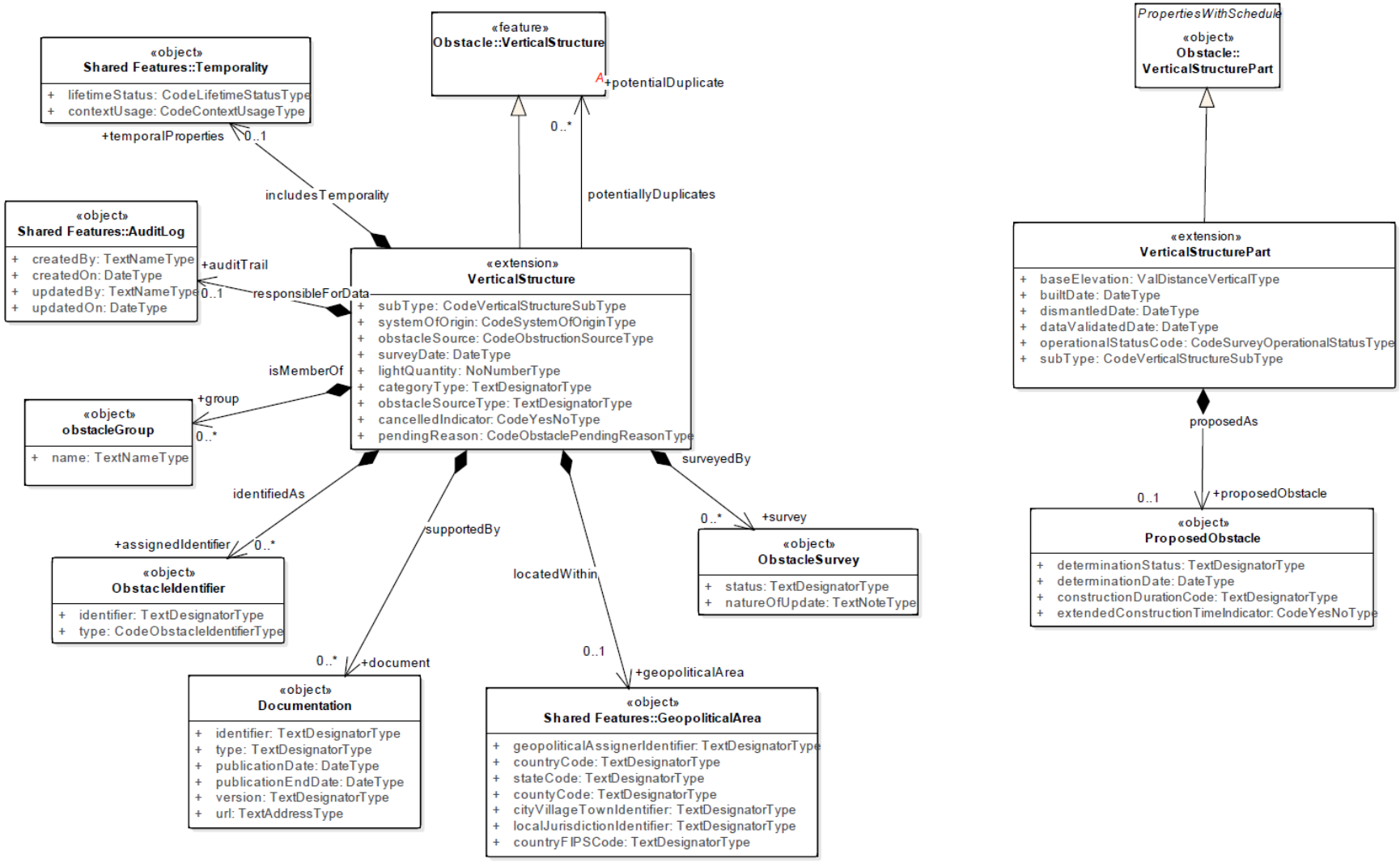
AIAS AIXM Payload

- **AIXM Core Features**
- **FAA Extensions**
  - Obstacle
  - Airport
  - Runway
  - Navaid System
  - Navaid Component

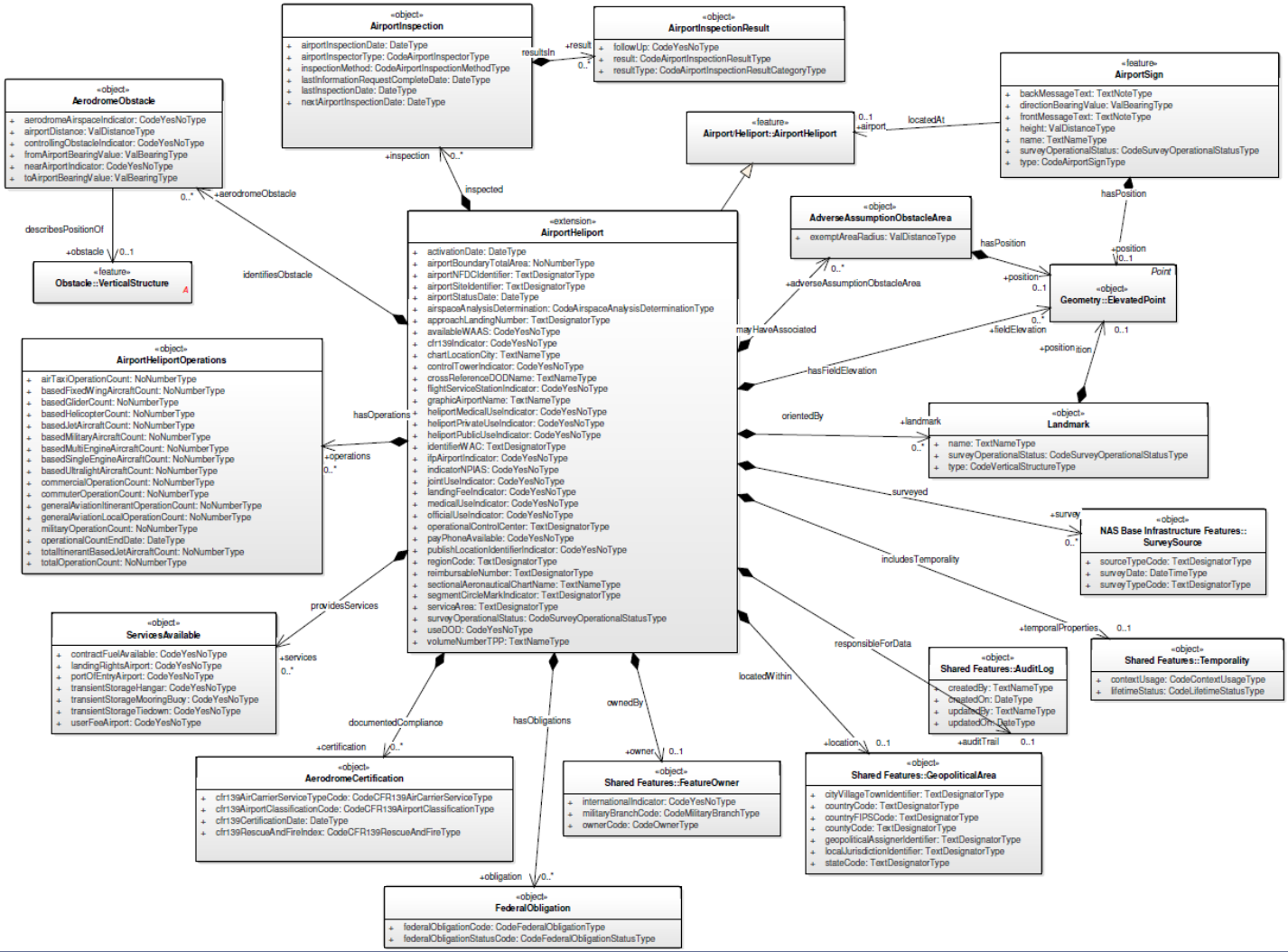
AIXM 5.1 Features

OAS	AAS	NAVAS
• VerticalStructure	• AirportHeliport • ApproachLightingSystem • ArrestingGear • GroundLightSystem • MarkingBuoy • OrganisationAuthority • Runway • RunwayCentrelinePoint • RunwayDirection • RunwayDirectionLightSystem • RunwayMarking • RunwayProtectArea • RunwayVisualRange • SurveyControlPoint • VisualGlideSlopeIndicator • AircraftGroundService • AirportSuppliesService	• Navaid • VOR • TACAN • Elevation • NDB • DirectionFinder • Localizer • MarkerBeacon • DME • Glidepath • Azimuth • CheckpointVOR • RadioFrequencyArea • OrganisationAuthority • Information Service

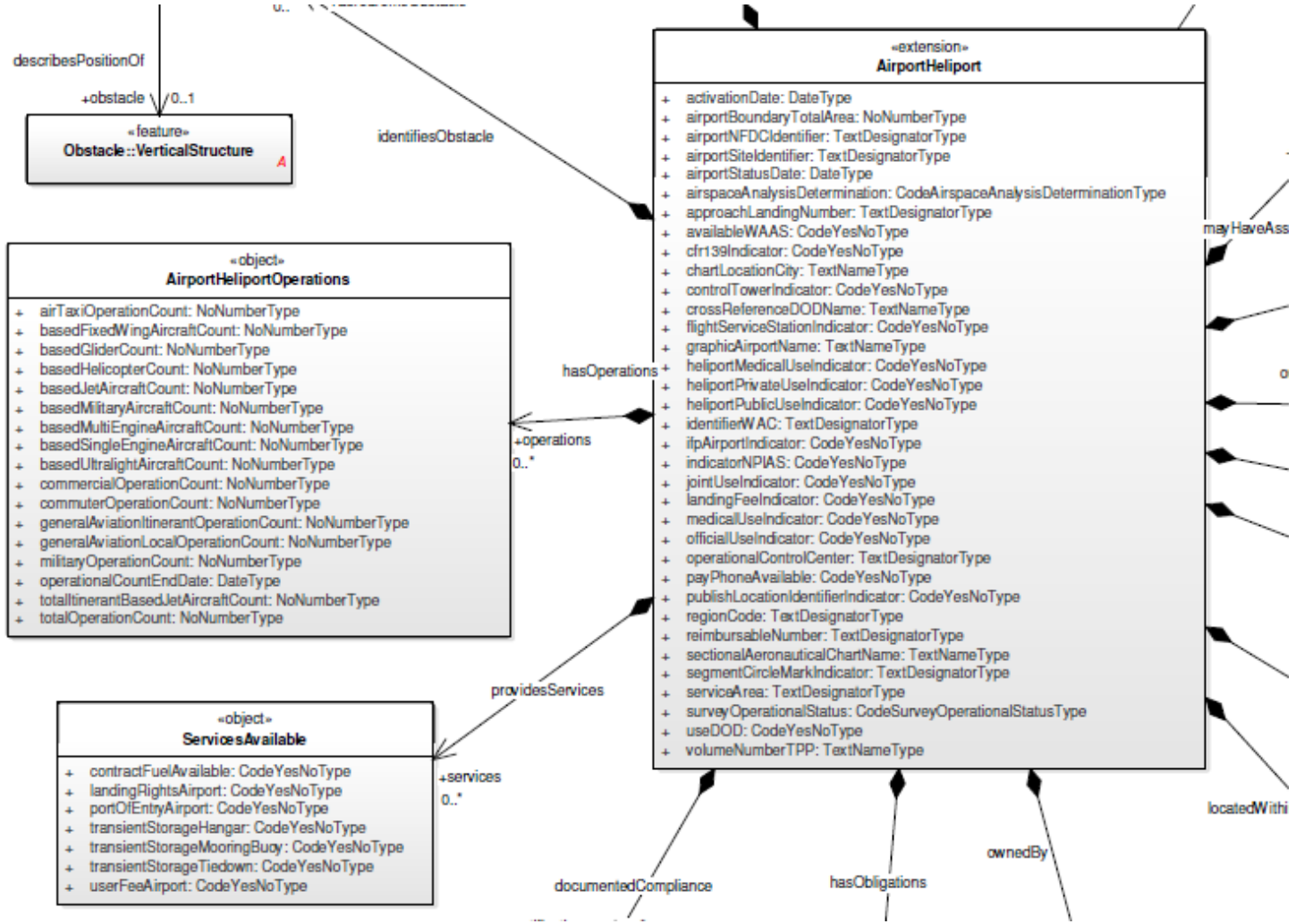
FAA Obstacle Extension



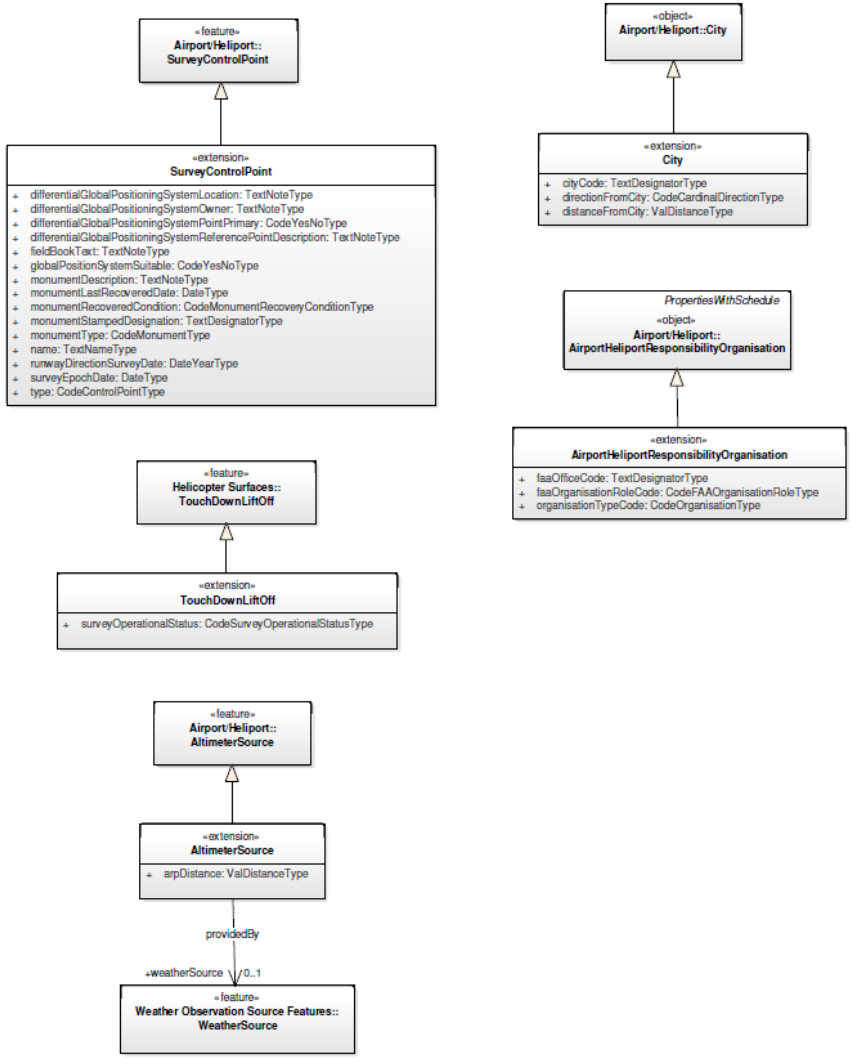
FAA Airport Extension



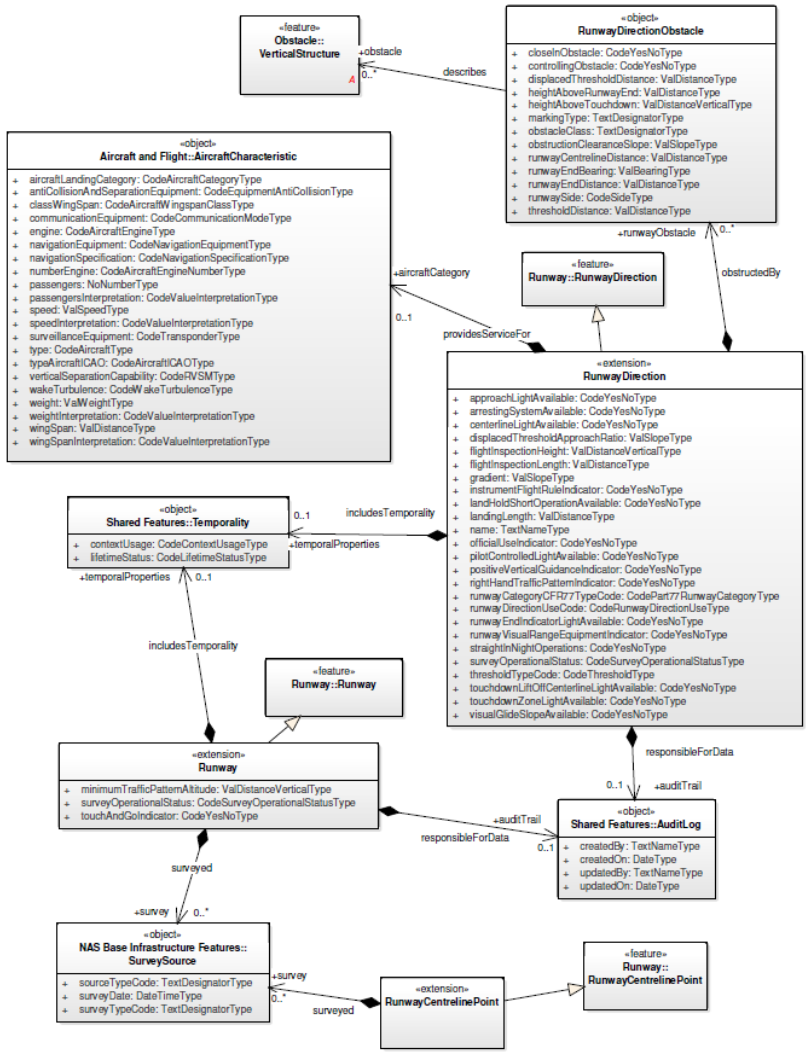
FAA Airport Extension



FAA Airport Extension



FAA Runway Extension



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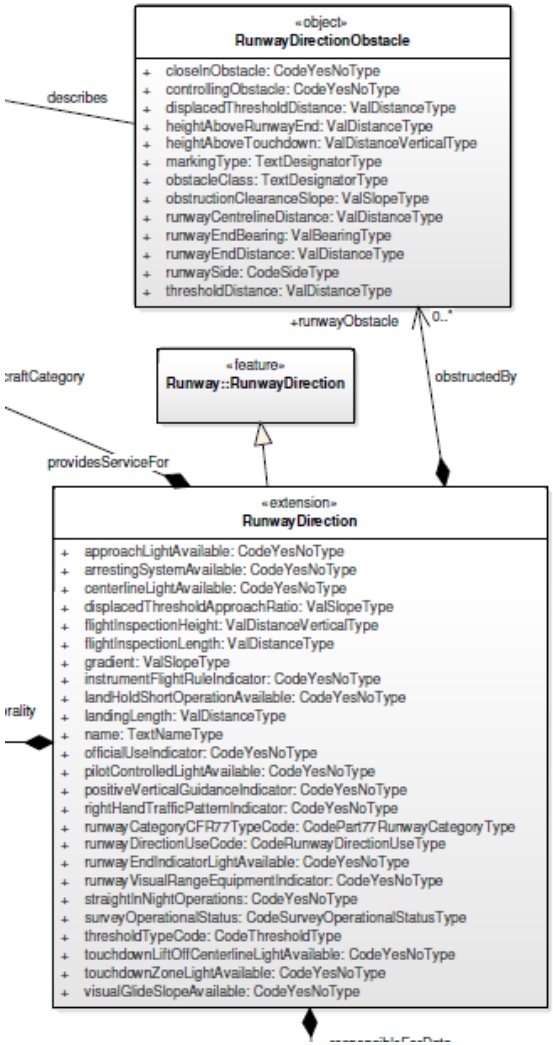
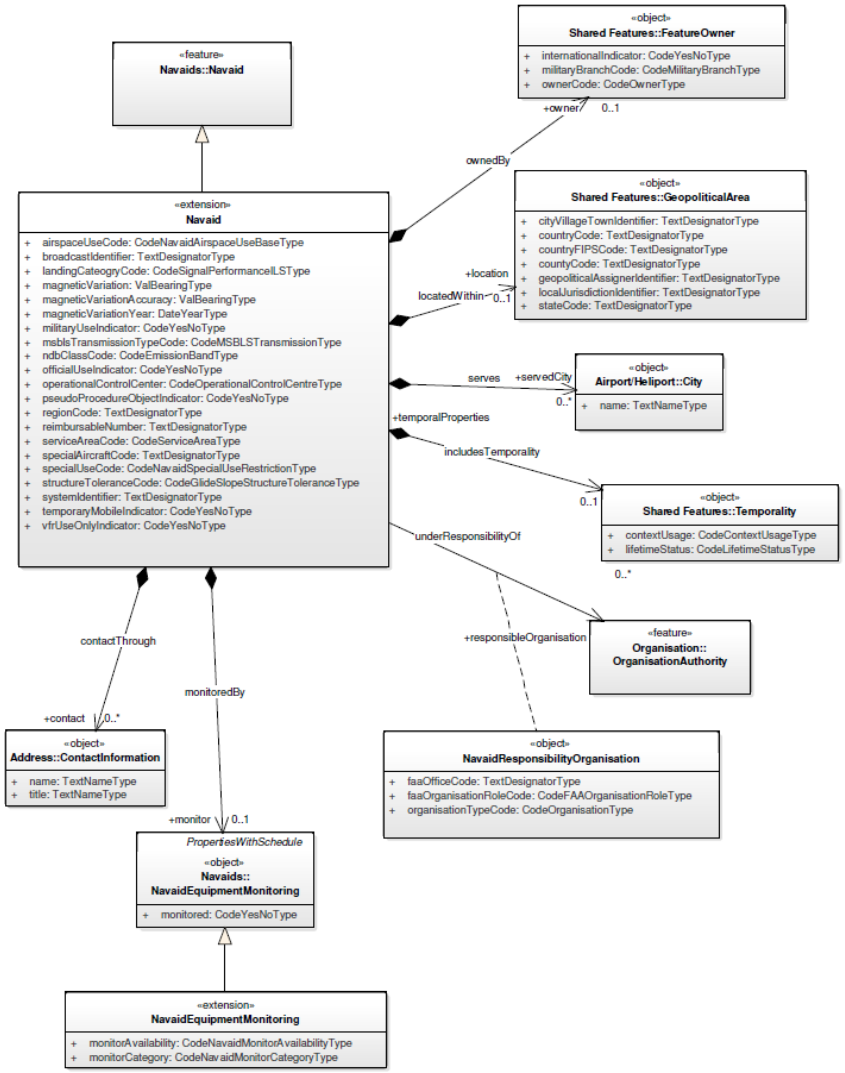
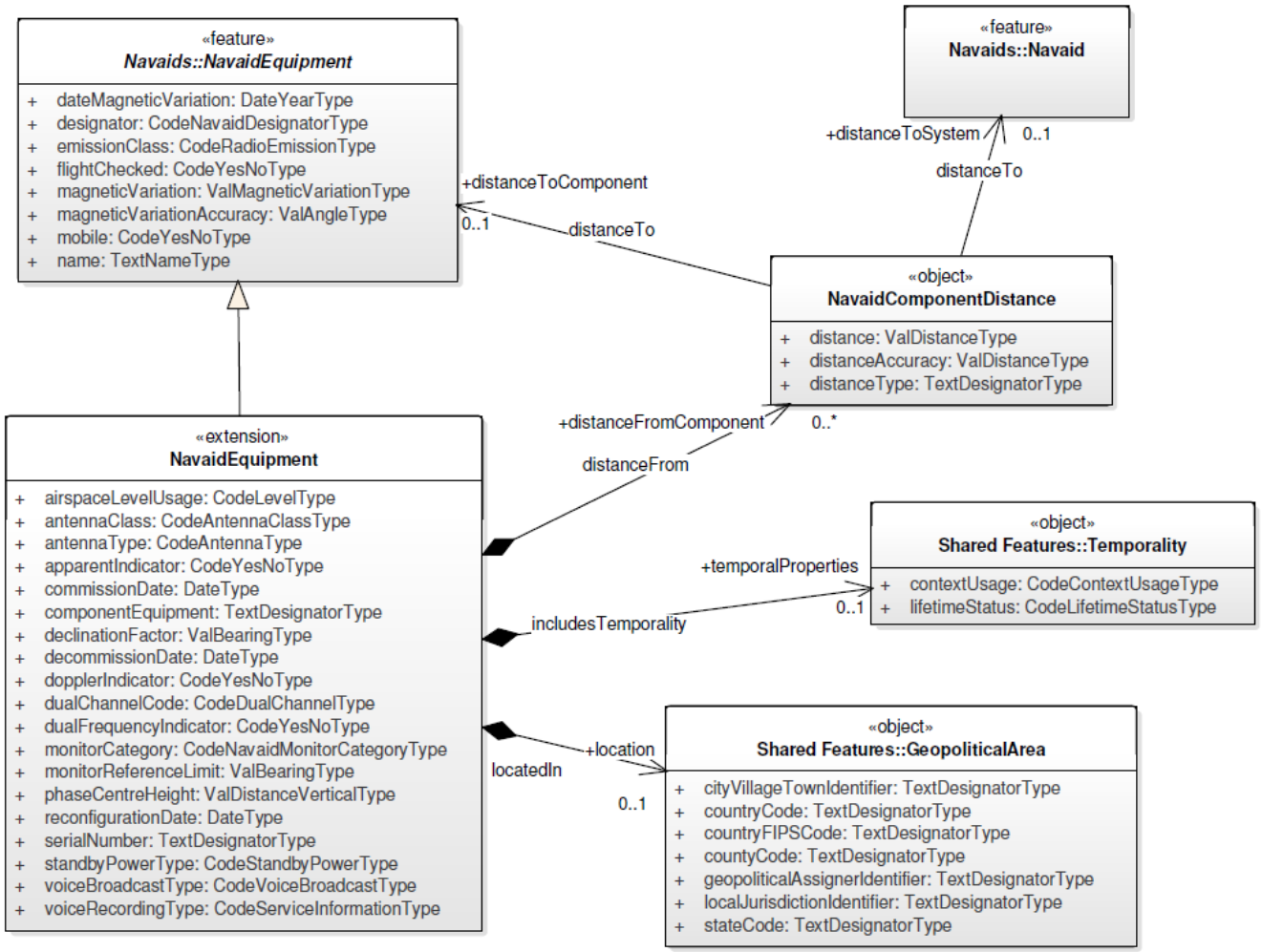


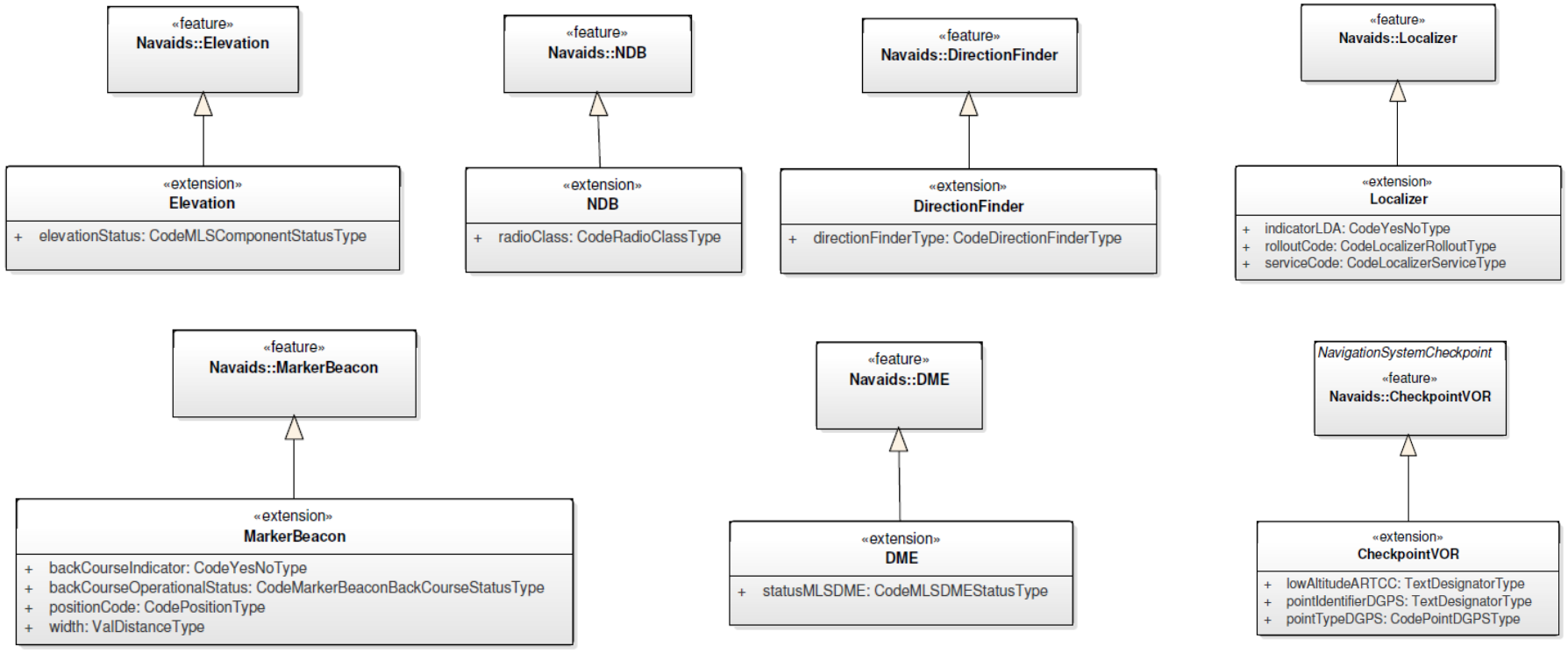
FAA NAVAID System Extension



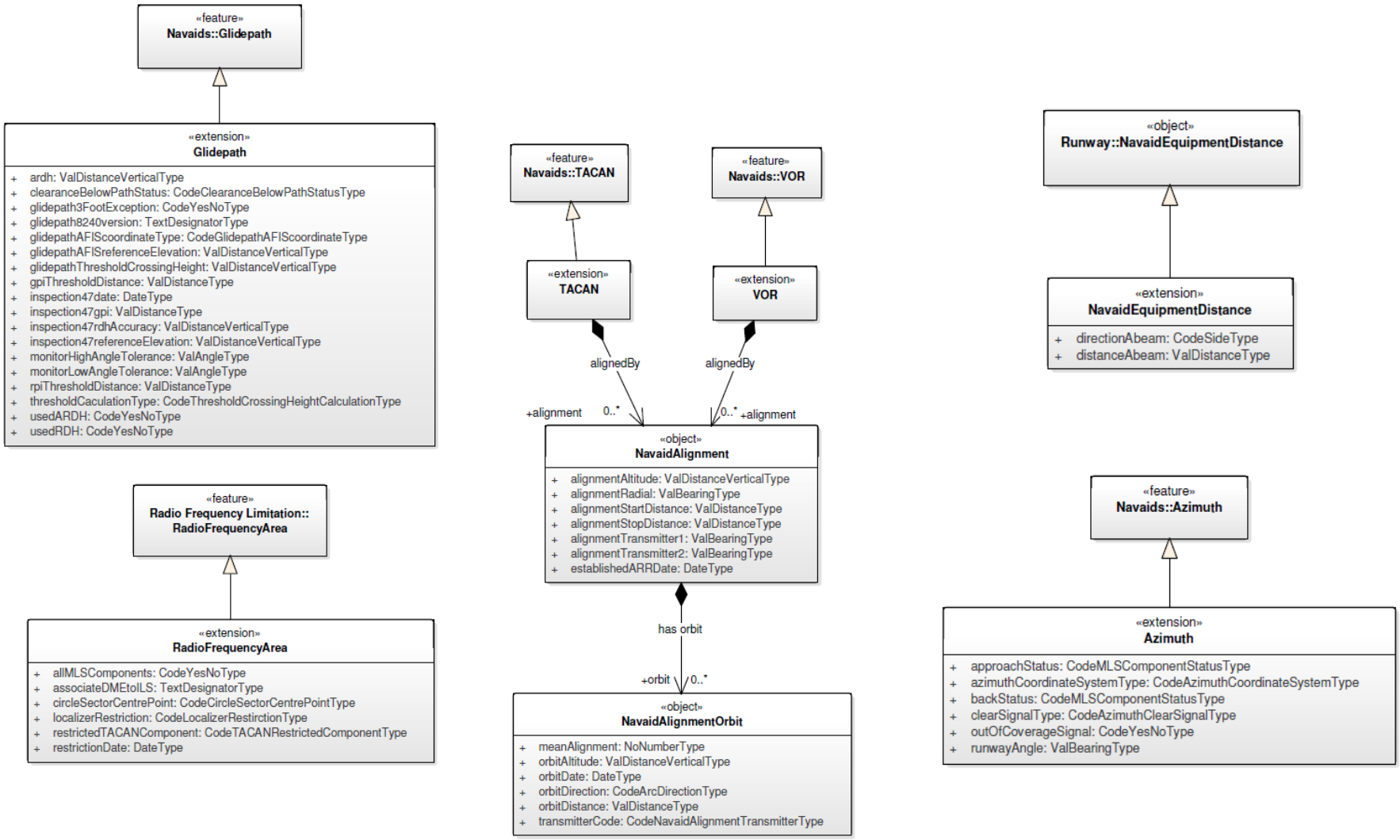
FAA NAVAID Component Extension



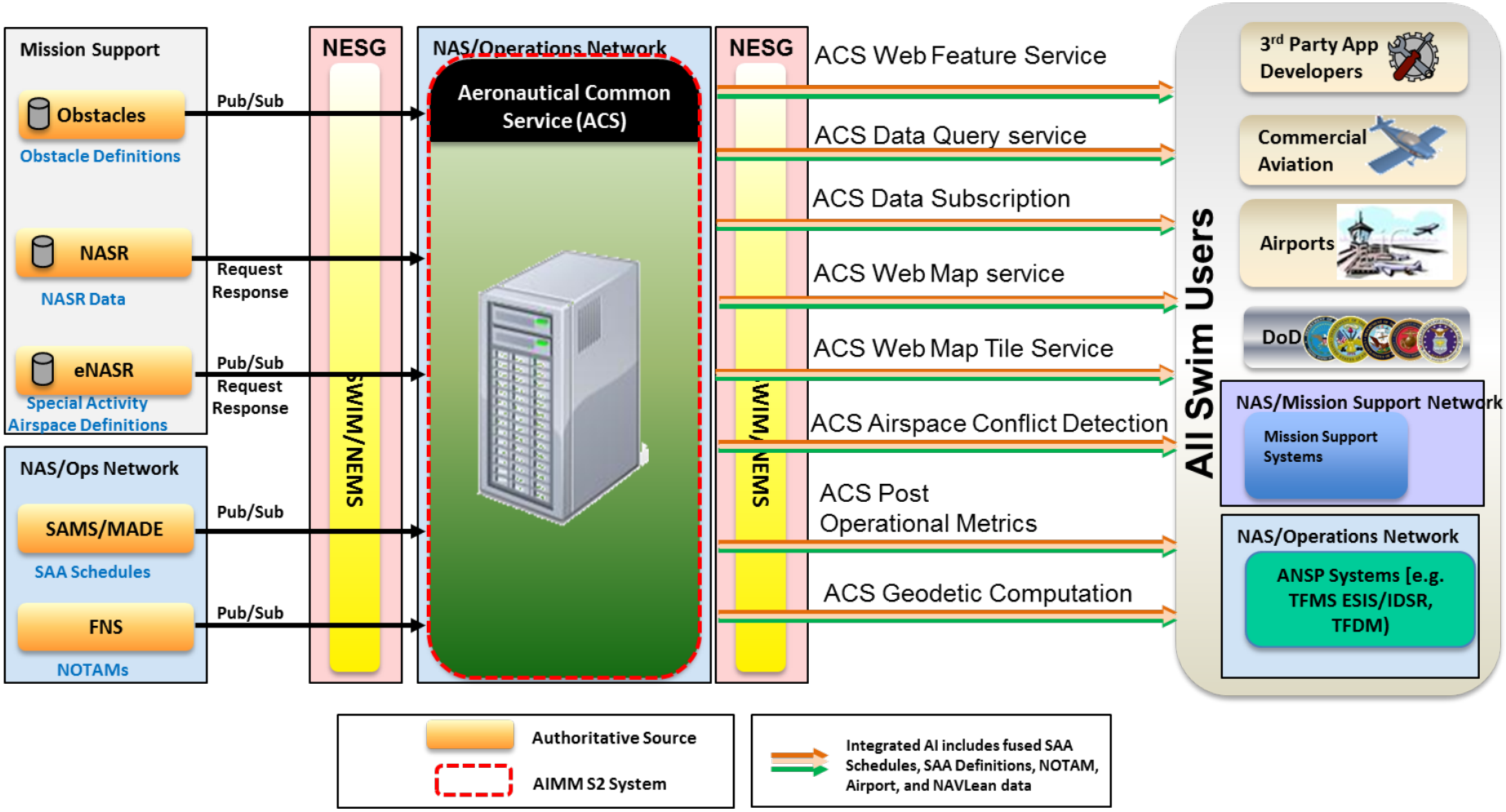
FAA NAVAID Component Extension



FAA NAVAID Component Extension



External Access (via SWIM/ACS)



Questions?

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