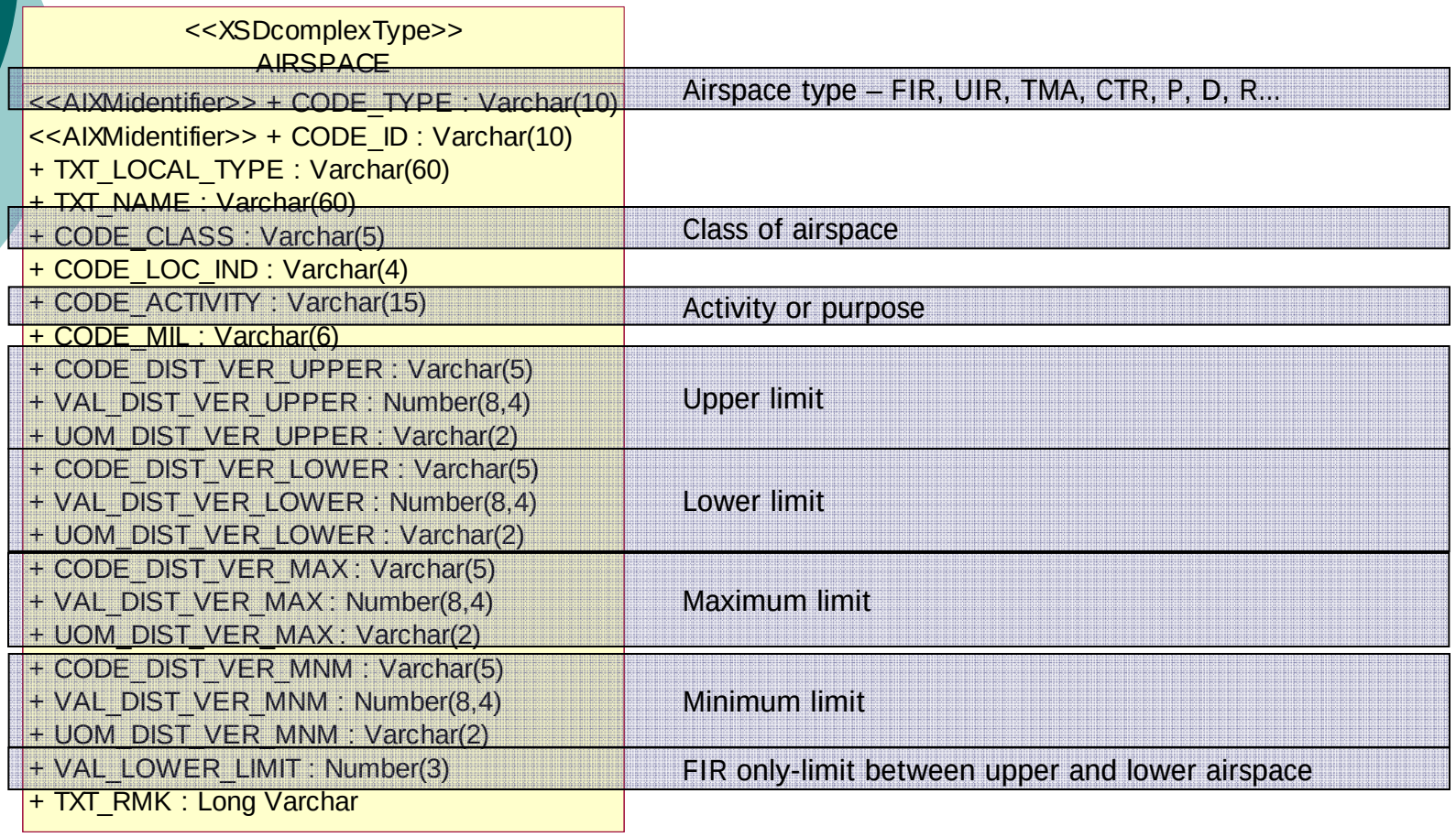
Airspace

AIXM 5 Public Design Review
February 7-8, 2006
Washington DC

Airspace

- Modelled by AIRSPACE entity
- Generic entity representing
  - Regions – ICAO and otherwise
  - Areas
  - Zones
  - Sectors – elementary and/or consolidated
- Airspaces used in/by
  - Air traffic services
  - Special regulated airspace
  - Client defined airspace
  - Various ‘limited’ airspace

AIRSPACE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AIRSPACE
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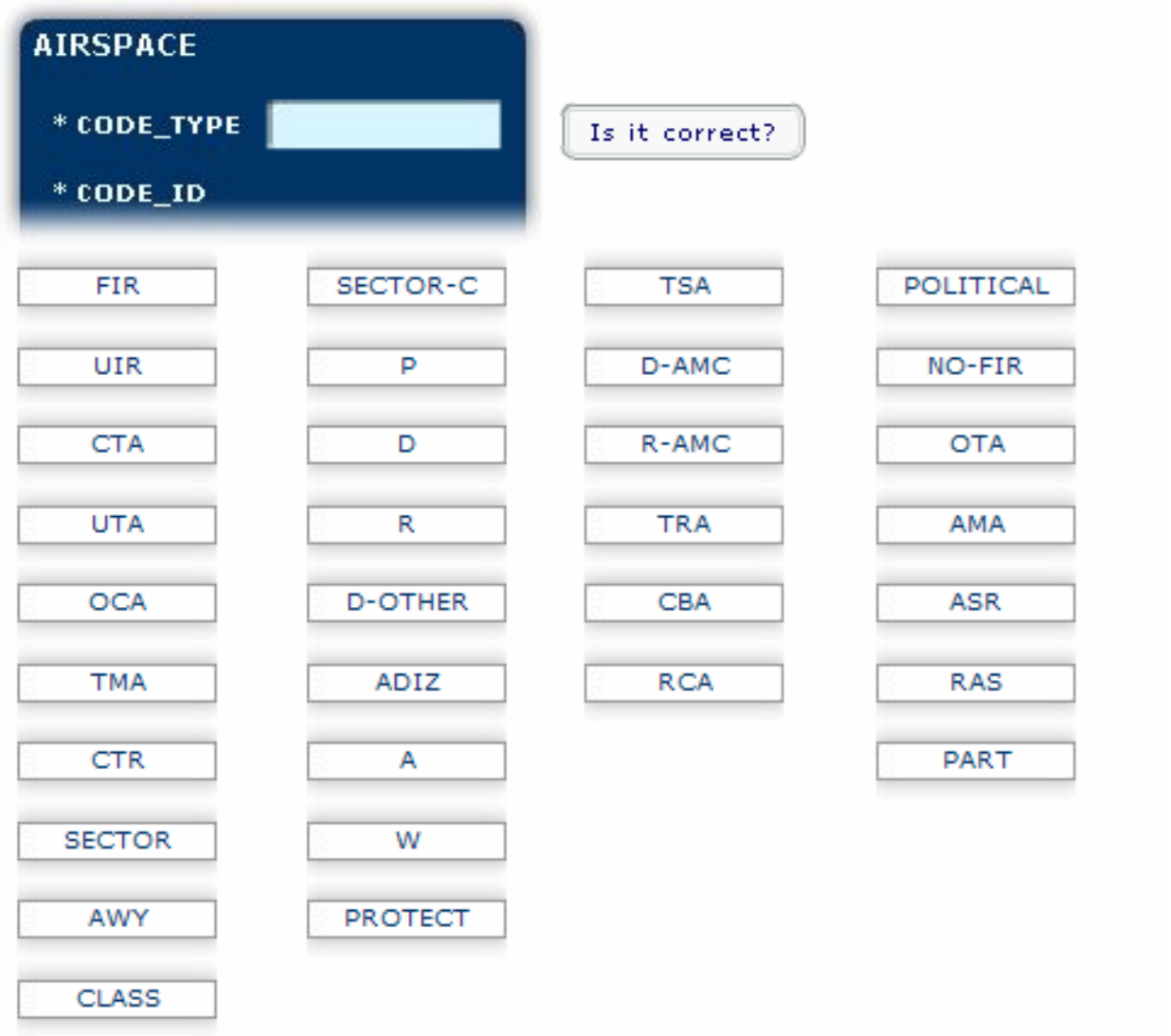
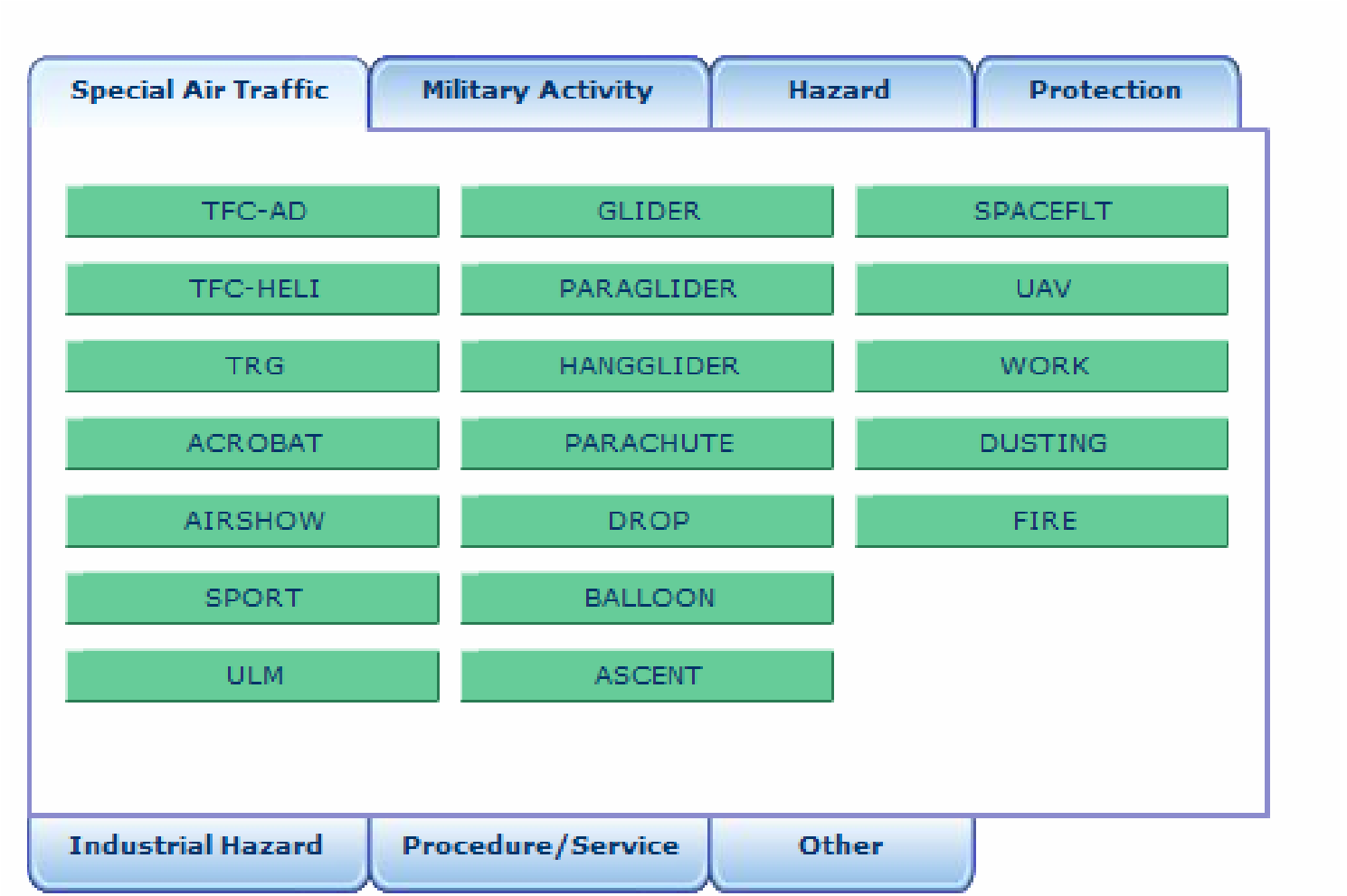
+ TXT_LOCAL_TYPE : Varchar(60)
+ TXT_NAME : Varchar(60)
+ CODE_CLASS : Varchar(5)
+ CODE_LOC_IND : Varchar(4)
+ CODE_ACTIVITY : Varchar(15)
+ CODE_MIL : Varchar(6)
+ CODE_DIST_VER_UPPER : Varchar(5)
+ VAL_DIST_VER_UPPER : Number(8,4)
+ UOM_DIST_VER_UPPER : Varchar(2)
+ CODE_DIST_VER_LOWER : Varchar(5)
+ VAL_DIST_VER_LOWER : Number(8,4)
+ UOM_DIST_VER_LOWER : Varchar(2)
+ CODE_DIST_VER_MAX : Varchar(5)
+ VAL_DIST_VER_MAX : Number(8,4)
+ UOM_DIST_VER_MAX : Varchar(2)
+ CODE_DIST_VER_MNM : Varchar(5)
+ VAL_DIST_VER_MNM : Number(8,4)
+ UOM_DIST_VER_MNM : Varchar(2)
+ VAL_LOWER_LIMIT : Number(3)
+ TXT_RMK : Long Varchar
Airspace type – FIR, UIR, TMA, CTR, P, D, R…
Class of airspace
Activity or purpose
Upper limit
Lower limit
Maximum limit
Minimum limit
FIR only-limit between upper and lower airspace

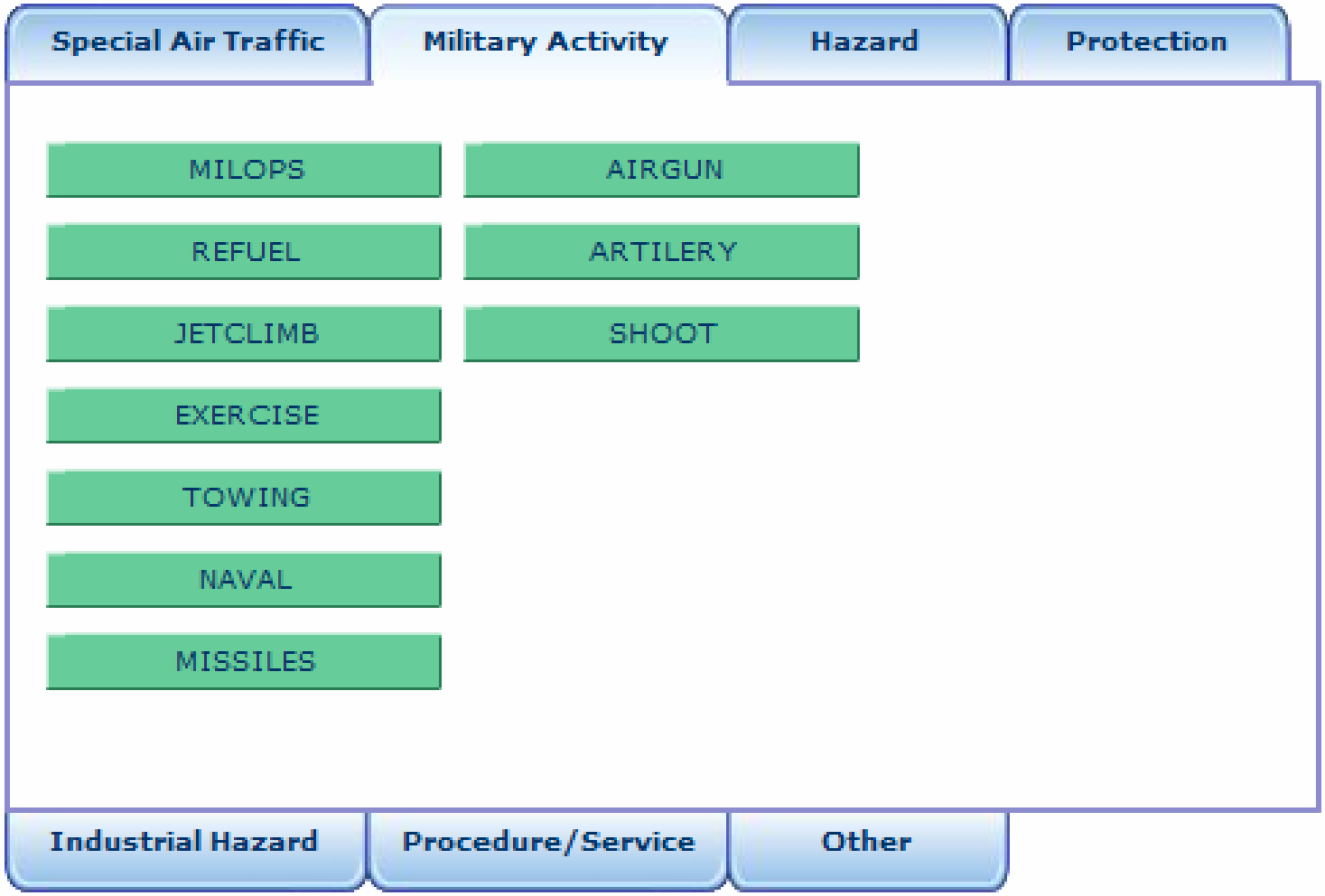
Airspace Type



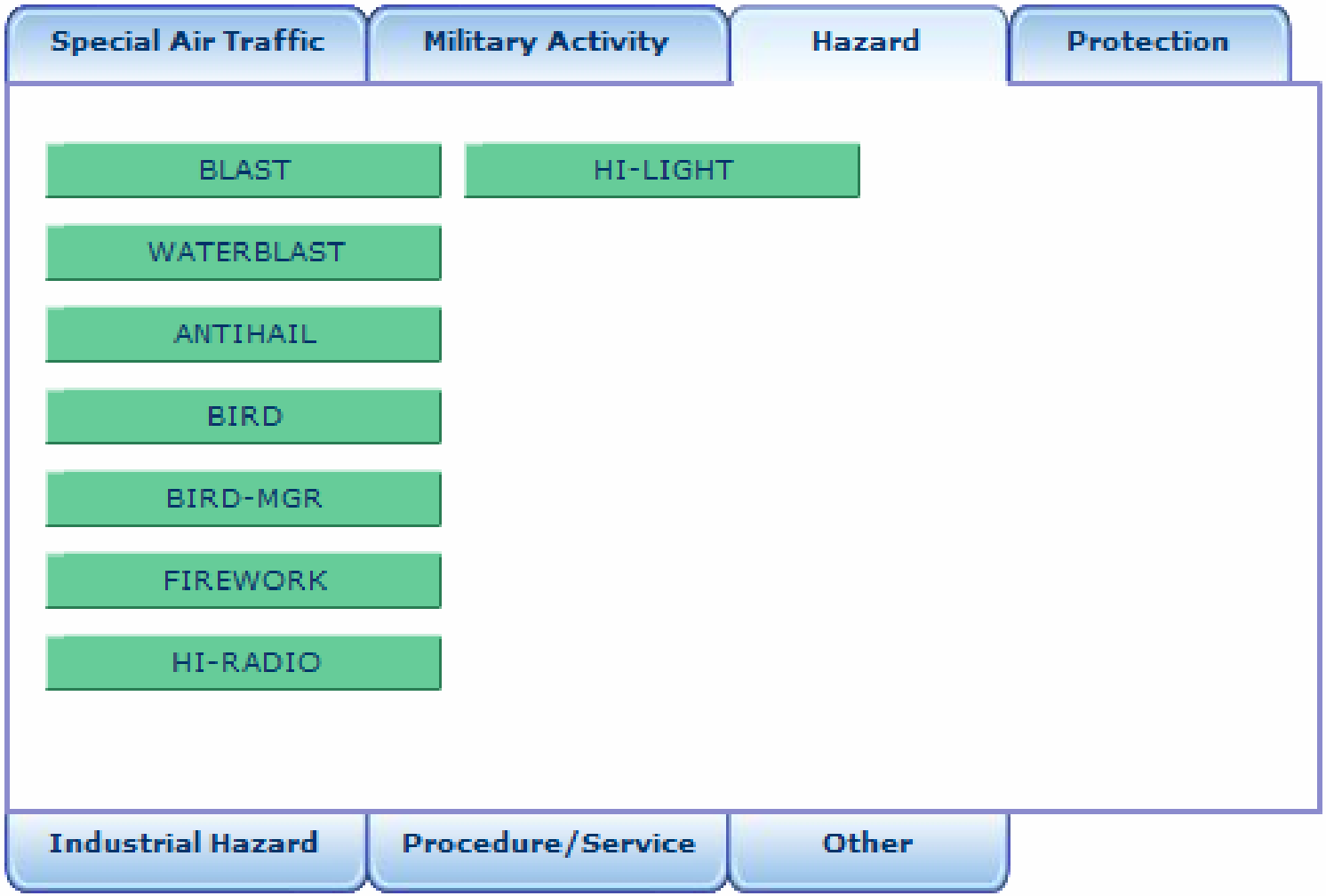
Airspace Activity



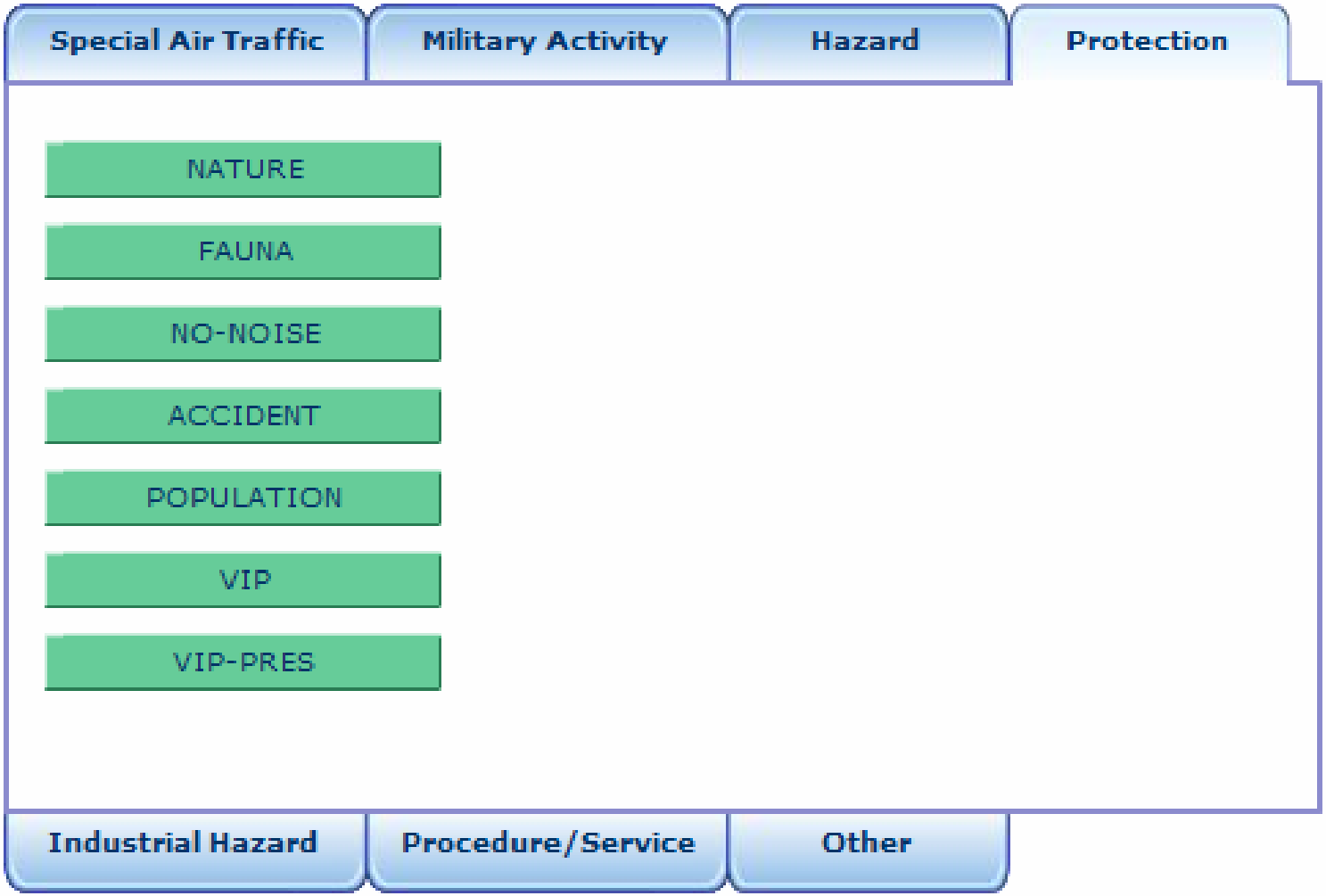
Airspace Activity



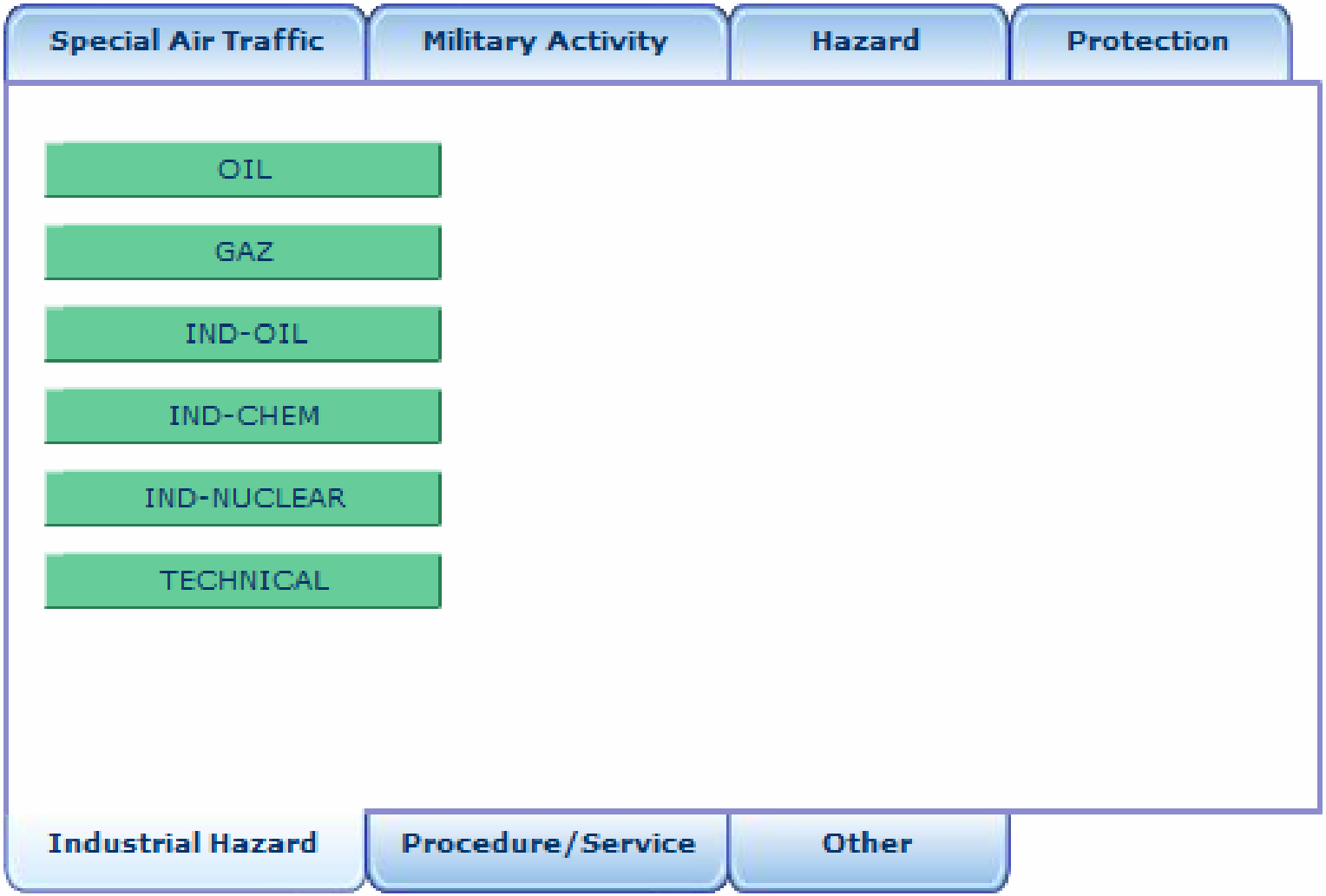
Airspace Activity



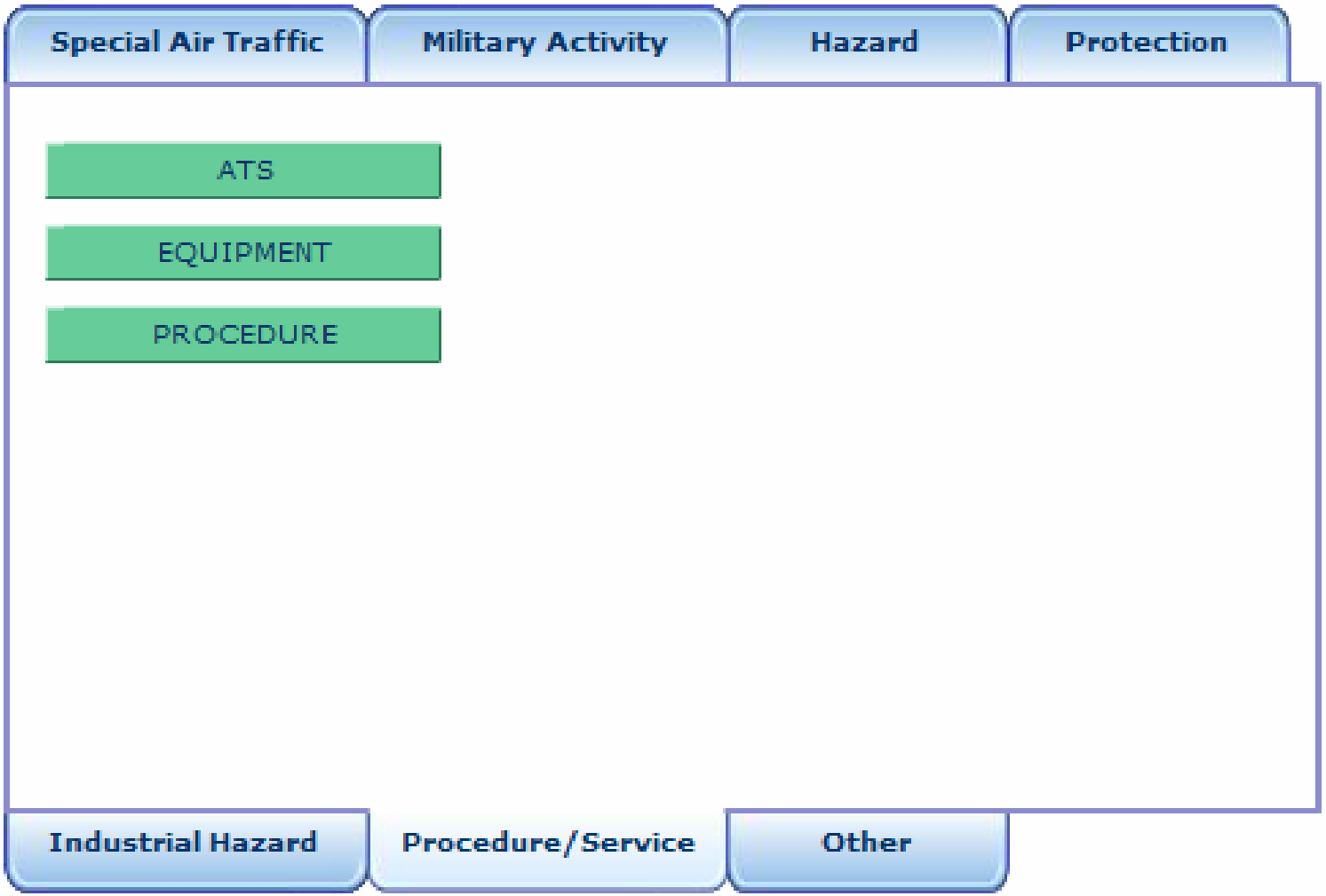
Airspace Activity



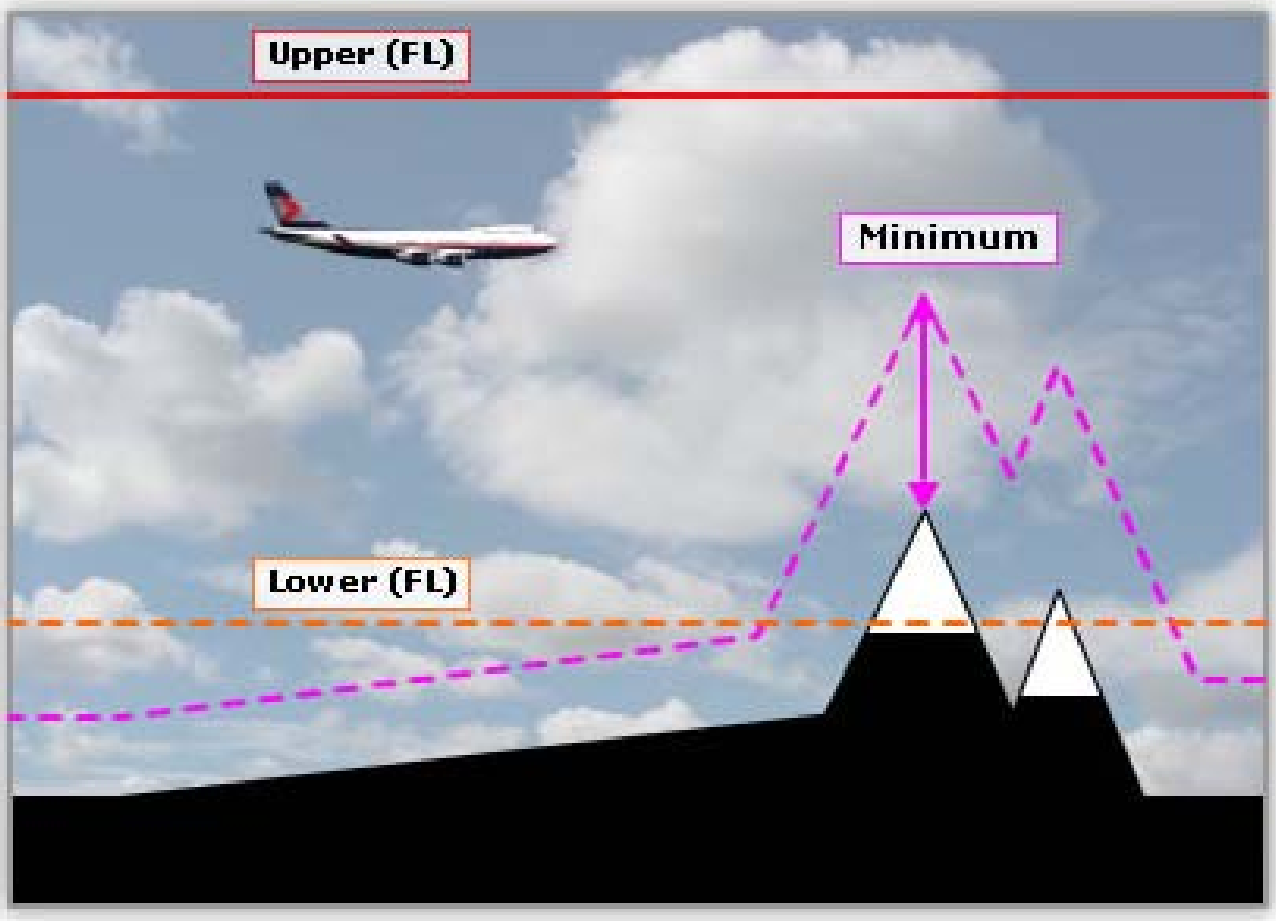
Airspace Activity



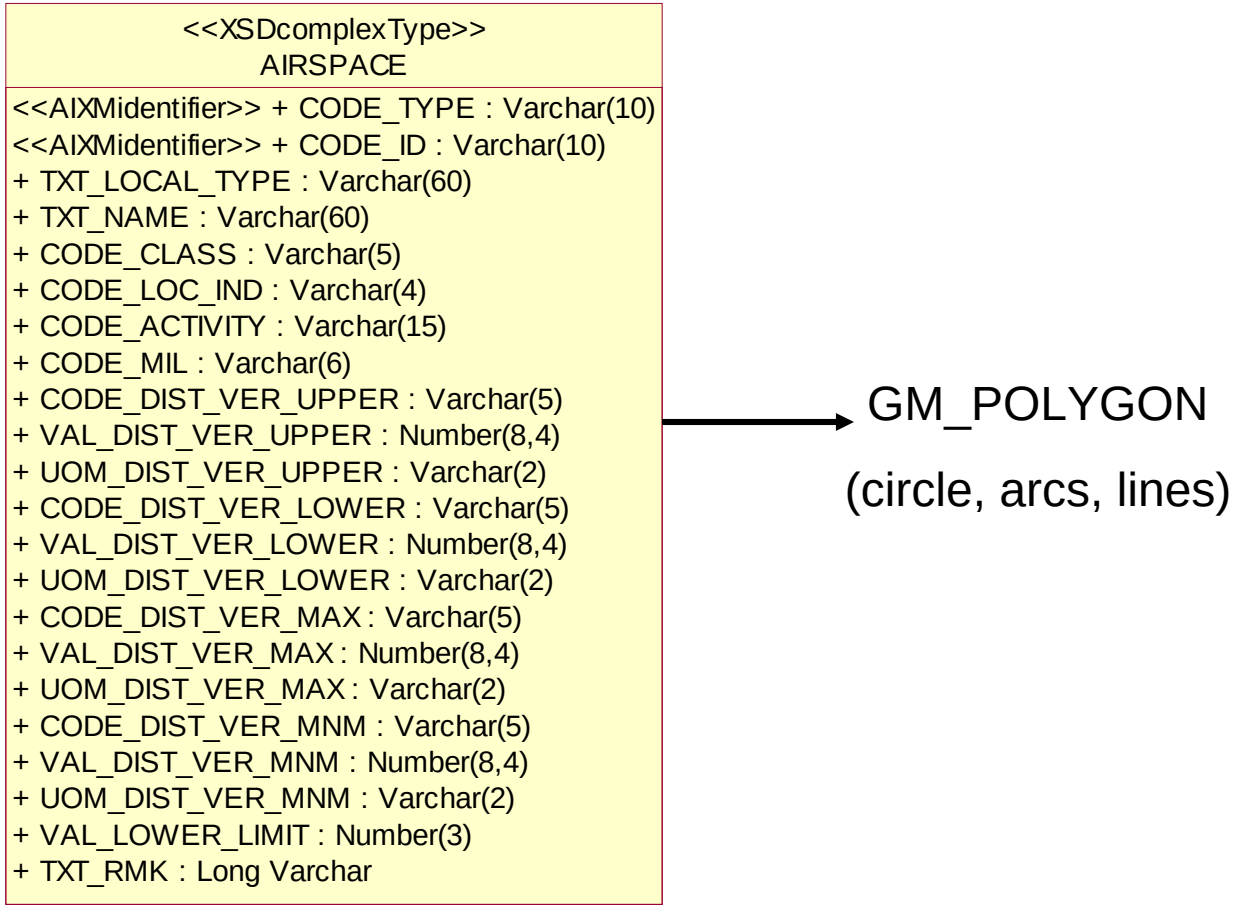
Airspace Activity



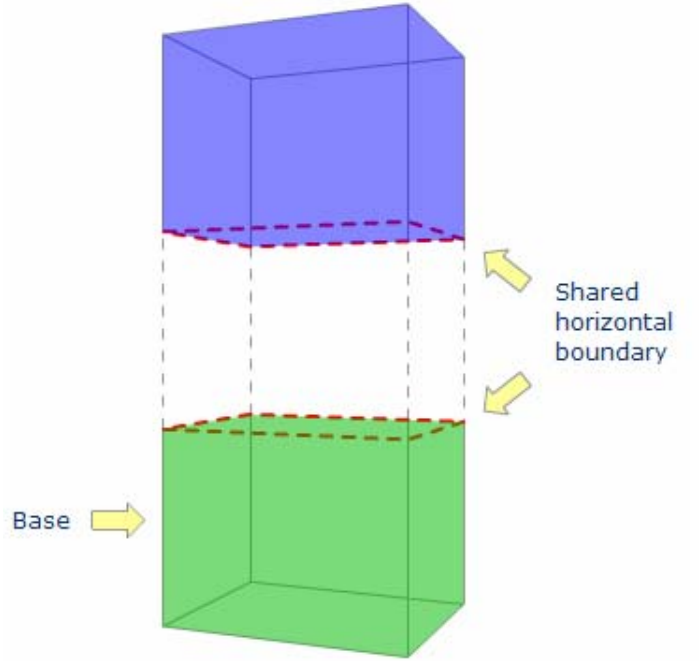
Airspace Altitudes



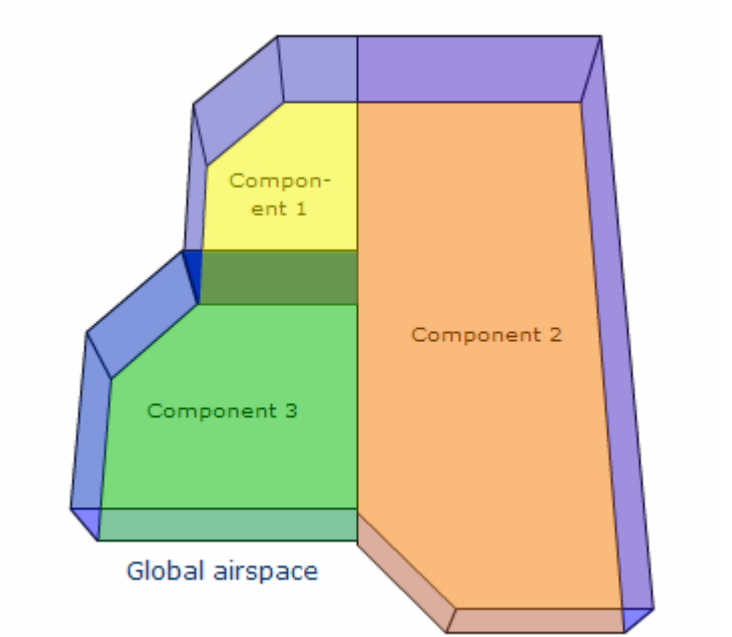
Airspace Geometry



Derived Airspace

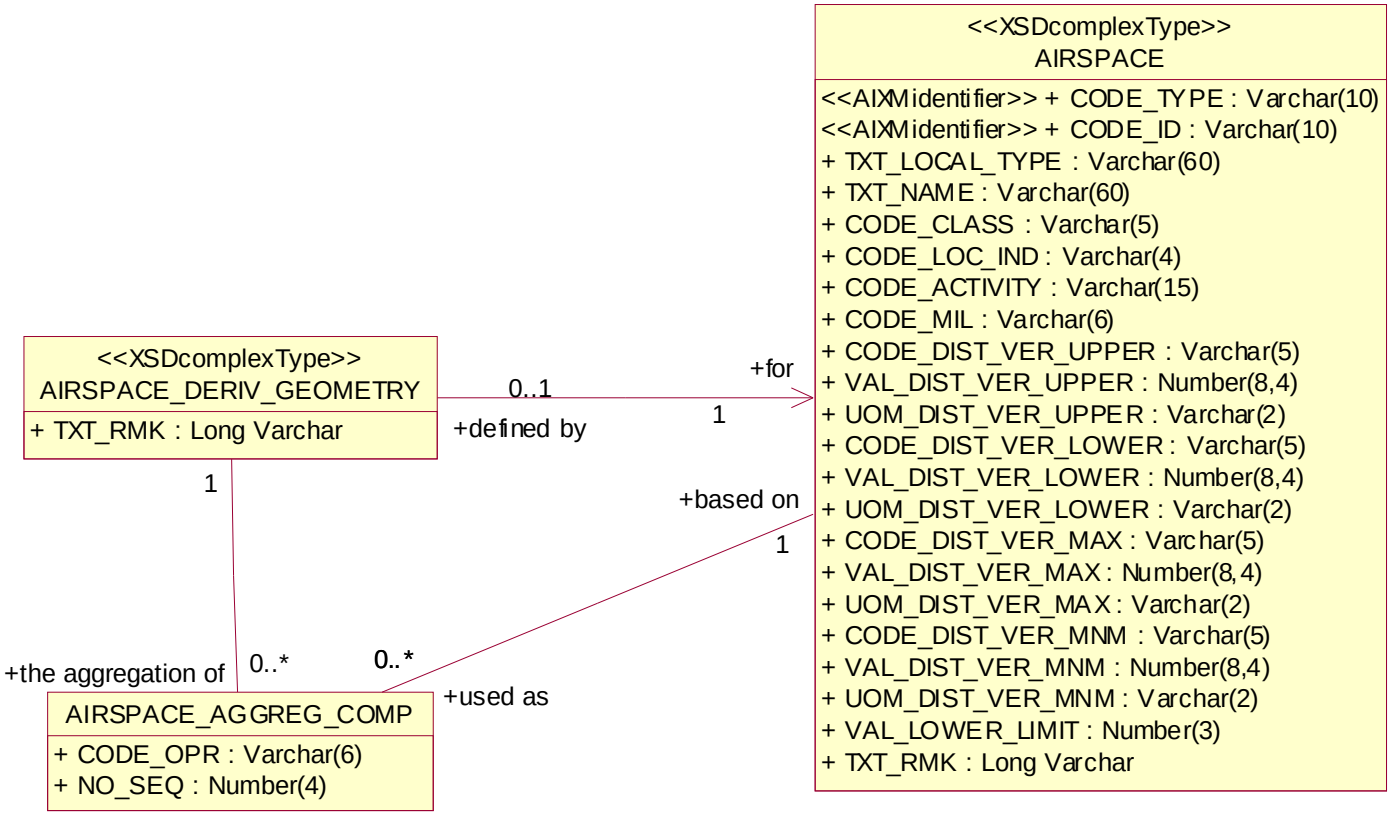


Airspaces with same horizontal border

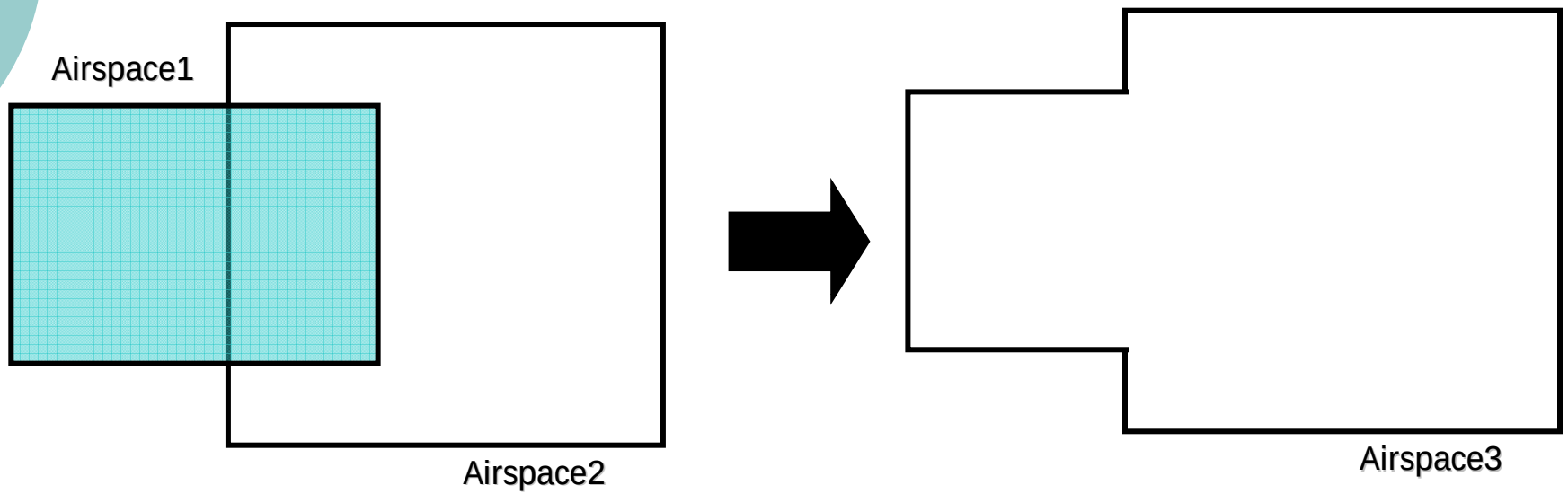


Airspace *derived* from aggregation of parts

Airspace Geometry



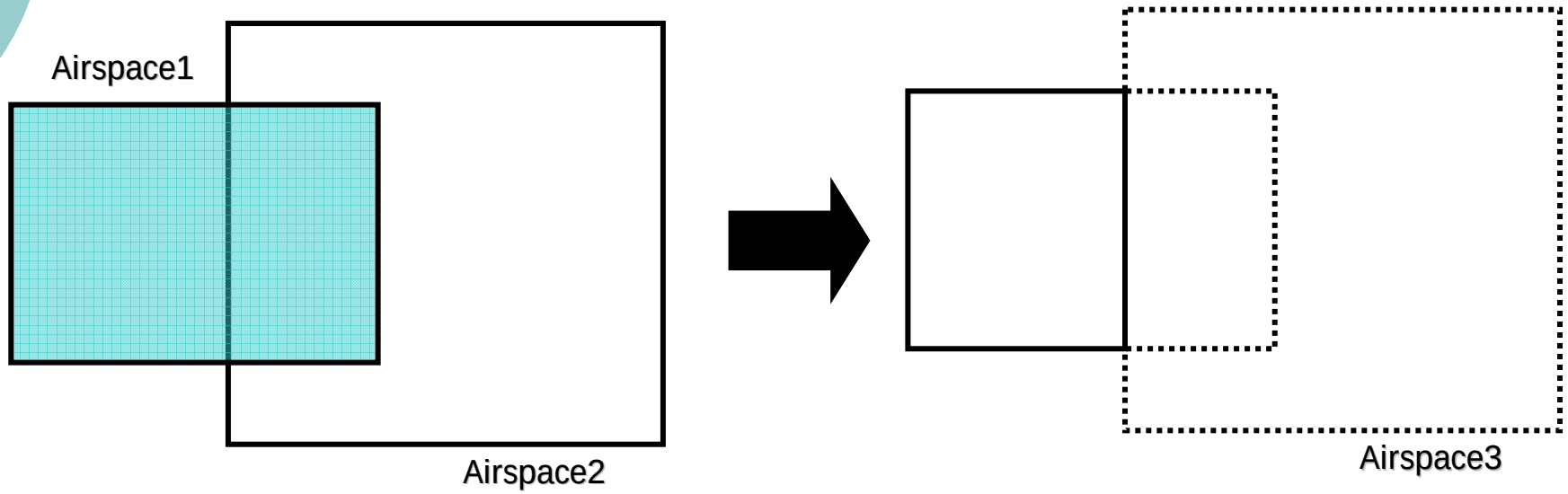
Aggregation Example - UNION



Airspace1 as aggregation component: CODE_OPR = BASE, NO_SEQ = 1

Airspace2 as aggregation component: CODE_OPR = UNION, NO_SEQ = 2

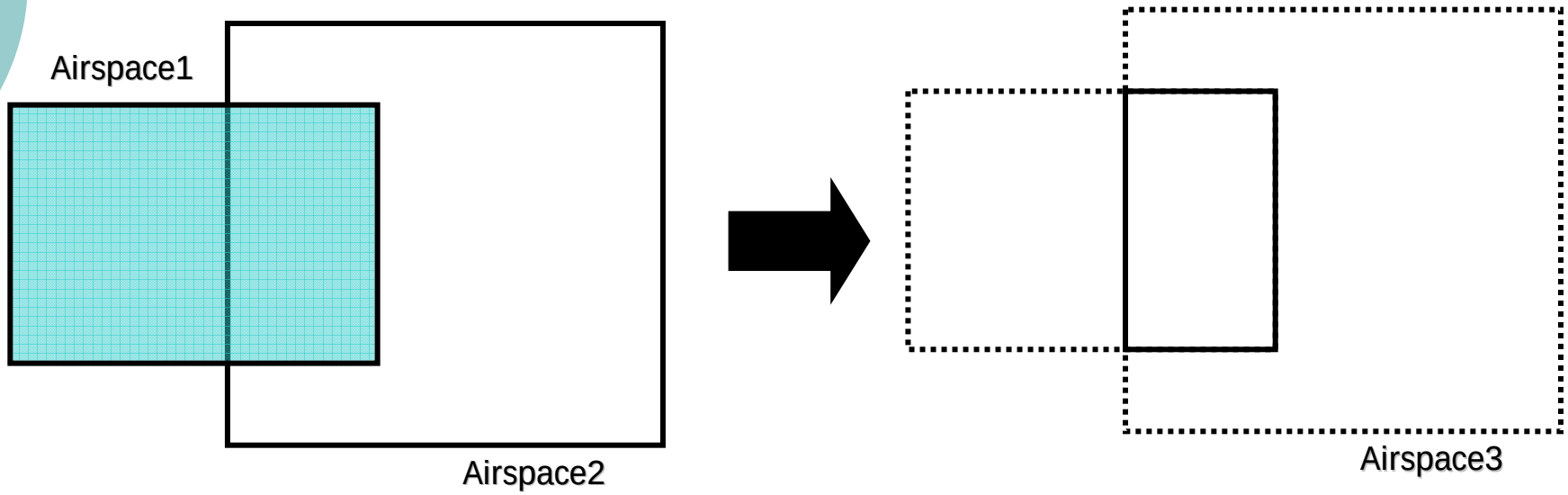
Aggregation Example - SUBTR



Airspace1 as aggregation component: CODE_OPR = BASE, NO_SEQ = 1

Airspace2 as aggregation component: CODE_OPR = SUBTR, NO_SEQ = 2

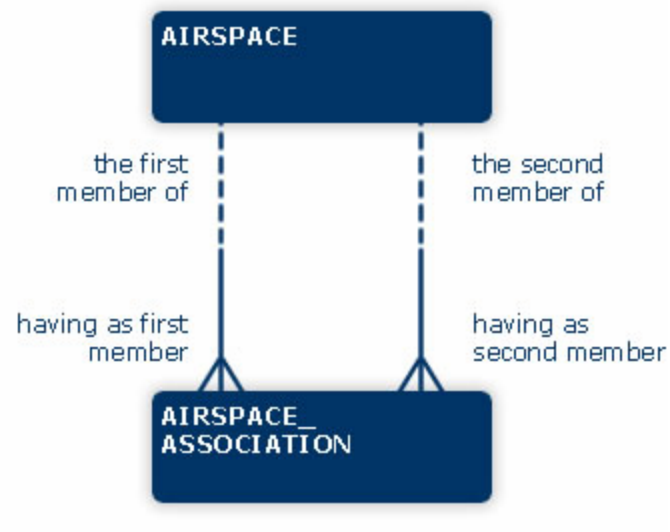
Aggregation Example - INTERS



Airspace1 as aggregation component: CODE_OPR = BASE, NO_SEQ = 1

Airspace2 as aggregation component: CODE_OPR = INTERS, NO_SEQ = 2

Association



The ***AirspaceAssocation*** feature allows us to model different relationships between airspaces that are not geographical, such as time limited use for example.

- When outside the allocated time, another airspace replaces the current one.
  - The time allocations can't overlap otherwise you would have two airspace geometries operating for the same airspace.
- Examples
  - Various sector configurations within a controlled area that are activated at different times.