

This diagram depicts the current state and capability level.

Business Outcome

Key Features

Display OGC sourced map layers

- MapView sources from OGC compatible servers
- Supports Feature, ESRI Shape files & images
- OGC SLD styling
- High performance concurrent layer rendering
- High performance composite renderer
- updates configurable from 500 mS to seconds

High performance realtime map layers

- Multiple concurrent realtime layers
- OGC SLD styling of realtime layers
- Attribute and id based tracking
- Configurable tracking
- Configurable Attribute and Detail schema
- Dynamically extensible memory structures
- With unbounded position reports and tracks
- Asynchronous position report messaging

Historical Retrieval & Display

- Unbounded historical position retrievals
- Bounding Rectangle Selection & time constraints
- Attribute Selection
- Filtering
- Playback and Filtering
- Asynchronous retrieval using messaging
- Command Interface API for external programs

Text Retrieval

- Command Interface API supporting attribute "free-text" retrieval with AND and OR conjunctions
- MBR and time constraints queries supported when text bound to Position Reports

Legend

- Fit for Purpose
- Essential Coverage
- Capability Gaps
- Capability Not Present

Enterprise Data

Realtime Database

- Thousands of position reports per second
- Concurrent message threads for each layer source
- Highly concurrent and partitioned storage access

Middleware Messaging

- Distributed and highly scalable messaging
- Persistent command and control
- Multi-threaded high concurrent message processing.

Cloud Based Ecosystem

Intelligence Surveillance Platform

Features

GIS 2D Mapping

- 2D GIS map layers
- OGC compatible
- SLD styling
- Features
- Shapes
- Images

Tracking

- dynamic reports per layer
- dynamic tracks per layer
- SLD configurable
- Identification distance
- Anti-clutter filtering
- Track symbols
- Track ICONS

Storage & Retrieval

- Dynamic real-time storage
- User selective indexing
- User selective identification distance
- Selective tracking and identification in HPS
- User defined schema

Attribute Indexing

- Schema configurable indexing
- User configurable schema
- Identifier, Attributes and Details
- Geo-reference text optional
- Free-text support

Free Text Search

- Free-text search via Command API
- Free-text search via Details window
- selection and filtering
- Conjunction AND and OR provided

Playback & Filtering

Use cases

Mapping

- OGC compatible
- Fast

ISR

- Near-Real-time rendering
- Fast tracking
- Low latency
- Maritime
- Air

Command & Control

- Some commands for internal use
- Easily extended

Identification Database admin

- Command & Control utilised for Identification database update

Performance

- Scalable
- Highly concurrent
- Highly performant

High Capacity

- Many real-time layers
- Many position reports
- Many tracks
- < 1mS latency

Oilstock replacement

- Not explored yet

- Mixed technology in use (SQL Server and Oracle Server) because of application dependency.
 - Uncertainty around cloud future leads to indecision/point solutions (i.e.. OAR)

IM Governance

User Extensible Data

- Real-time layer messaging is User Extensible
- Schema for real-time layer is User Extensible
- User extensible Attribute, Detail and Text retrieval.

Data Provenance

- Message data is security labelled
- Message data is source labelled
- Message data is layer labelled
- Message data is time-stamped
- Track data us identified
- Raw data can be uniquely identified

Partitioned Archive

- HPS data partitioned on time and source
- HPS indexing is contained within partition
- HPS indexing can be rebuilt from partition
- HPS partitions archived via file-system
- Real-time database tools for exploring partitions

Network Addressable Storage compatible

- HPS caching is resilient to disk write fail
- Supports DFS
- Support NAS
- Supports SAN
- OS independent – written in Java