



# Air Force Flight Test Center



AFFTC

## Employing a Common Situational Awareness Display for Multiple Projects and Classifications

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10 May 2011

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Approved for public release; distribution is unlimited.

AFFTC-PA No.: 11013

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# Common Situational Awareness Display



- Why develop a common situational awareness display?

## Testing With Multiple Players





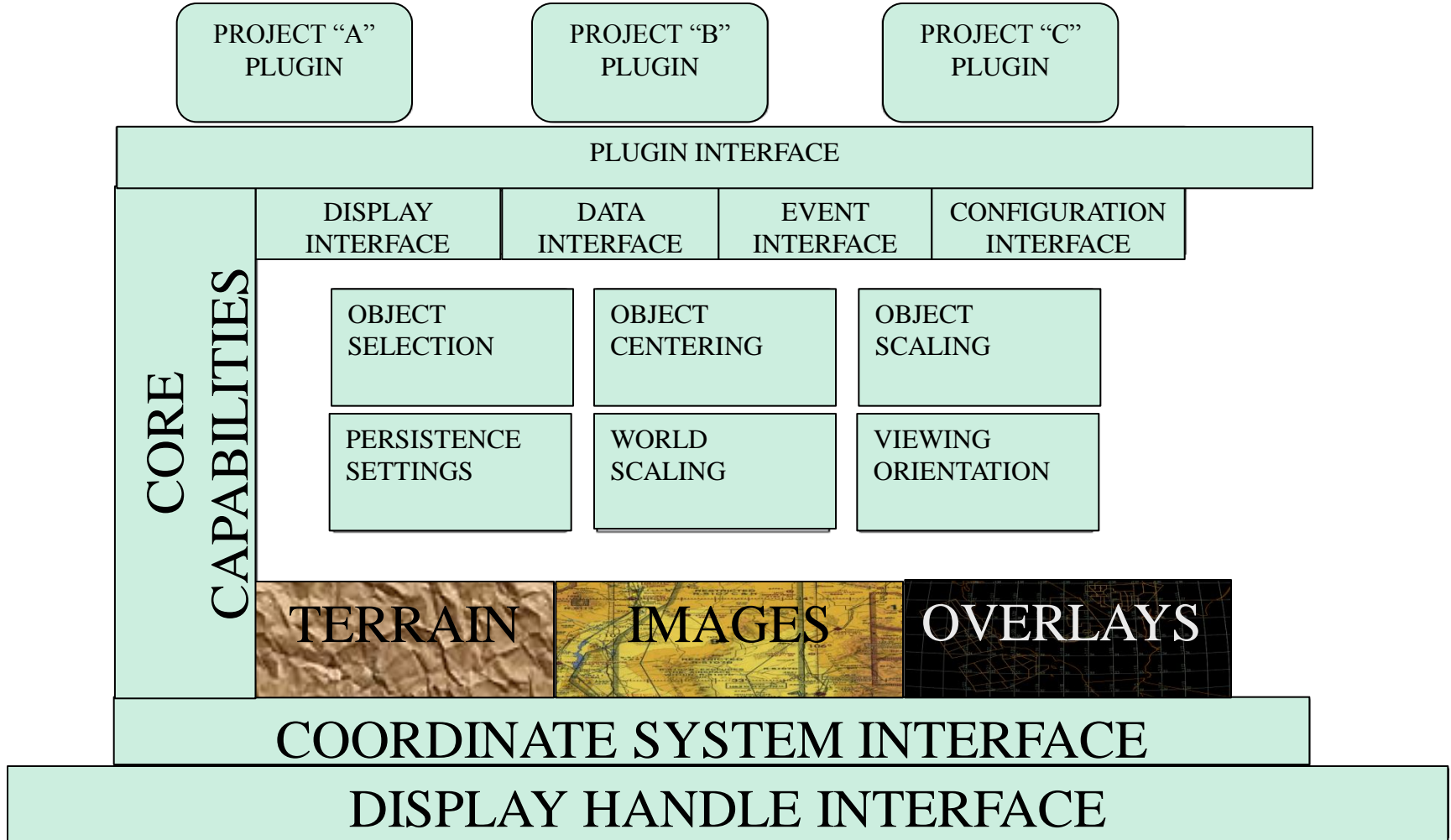
# Overview



- **Common Situational Awareness Display**
  - Provide core set of capabilities
  - Provide plug-in capability
- **Scenario Builder Tool**
  - Help setup scenarios involving ownership, truths and tracks
- **Situational Awareness Software Demonstration**
  - AVI demo of SA running a scenario

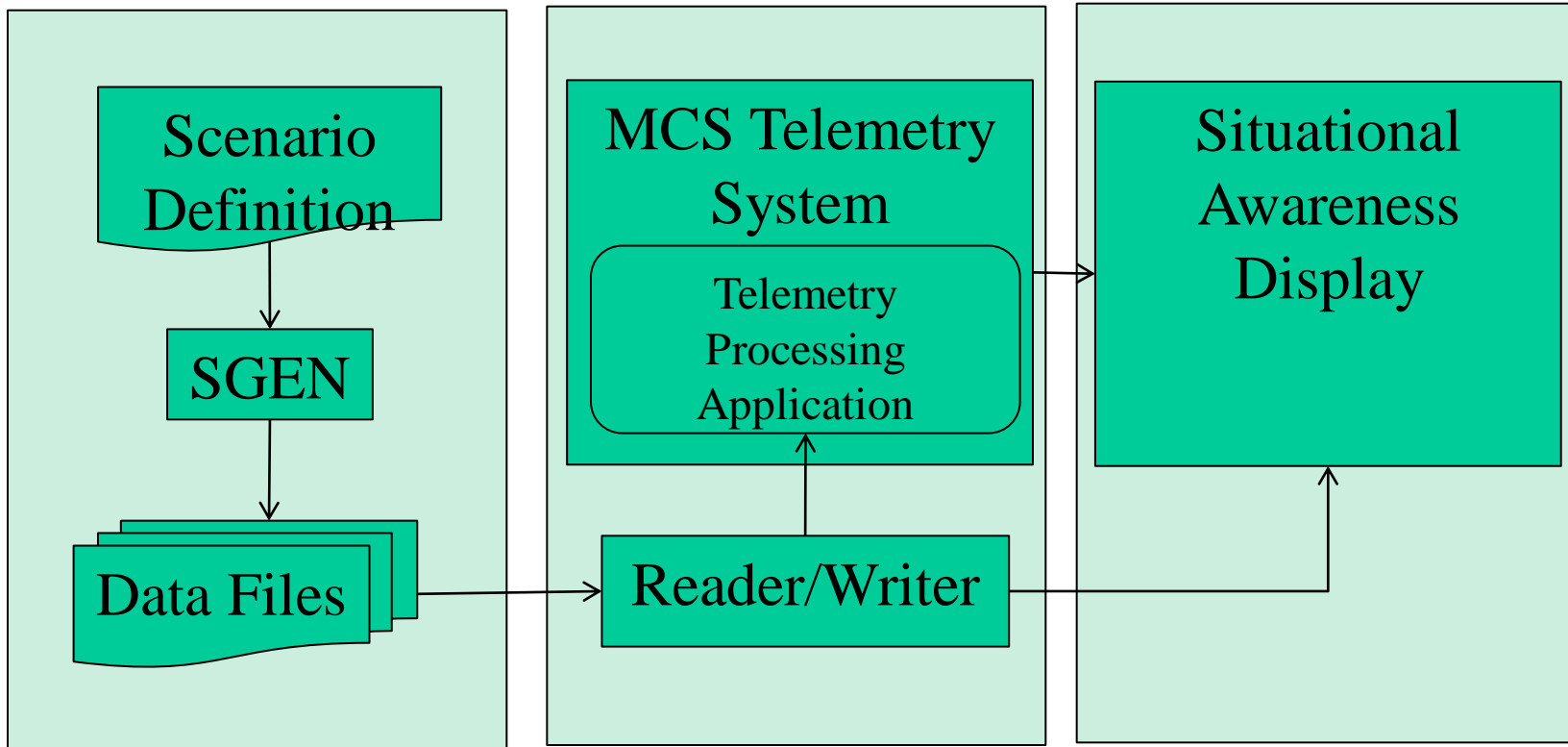


# Common Situational Awareness Display





# Scenario Builder Tool



- Driven from a scripting language to simulate ownership, targets, truths, various avionics tracks.
- Output products are CSV data files for which players can be written.
- Great for developing and refining the data processing algorithms.



# Scenario Builder Tool



- **Three Weaves @ 5.4 g, 4 sec extents**

- **PITT, me,0, 0,c,0 // zero out attitude**

- **ROLT,me,0, 0,c,0**

- **YAWD,me,2, 5.4,c,90**

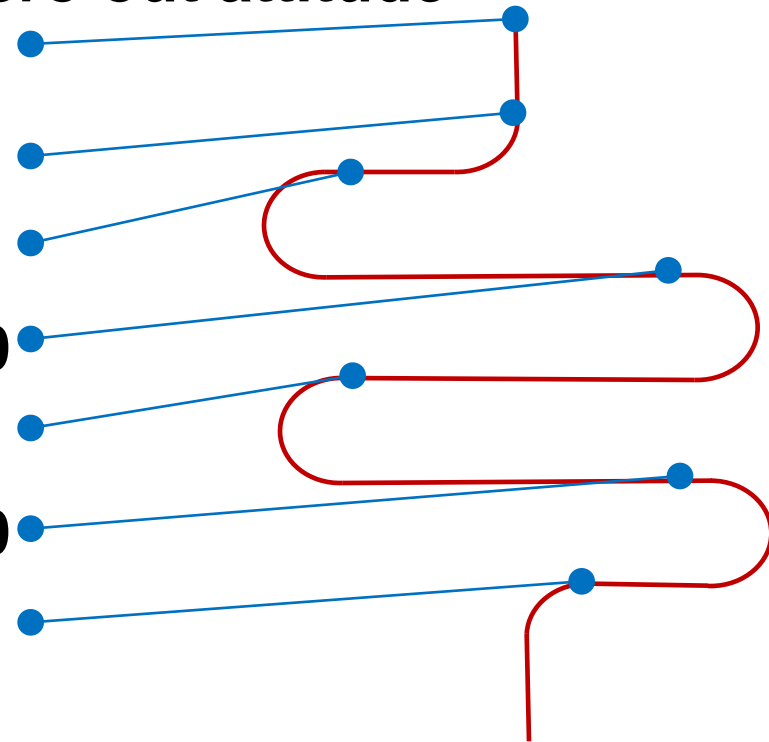
- **YAWD,me,2,-5.4,c,180**

- **YAWD,me,4,+5.4,c,180**

- **YAWD,me,4,-5.4,c,180**

- **YAWD,me,4,+5.4,c,180**

- **YAWD,me,4,-5.4,c,90**





# Scenario Builder Tool



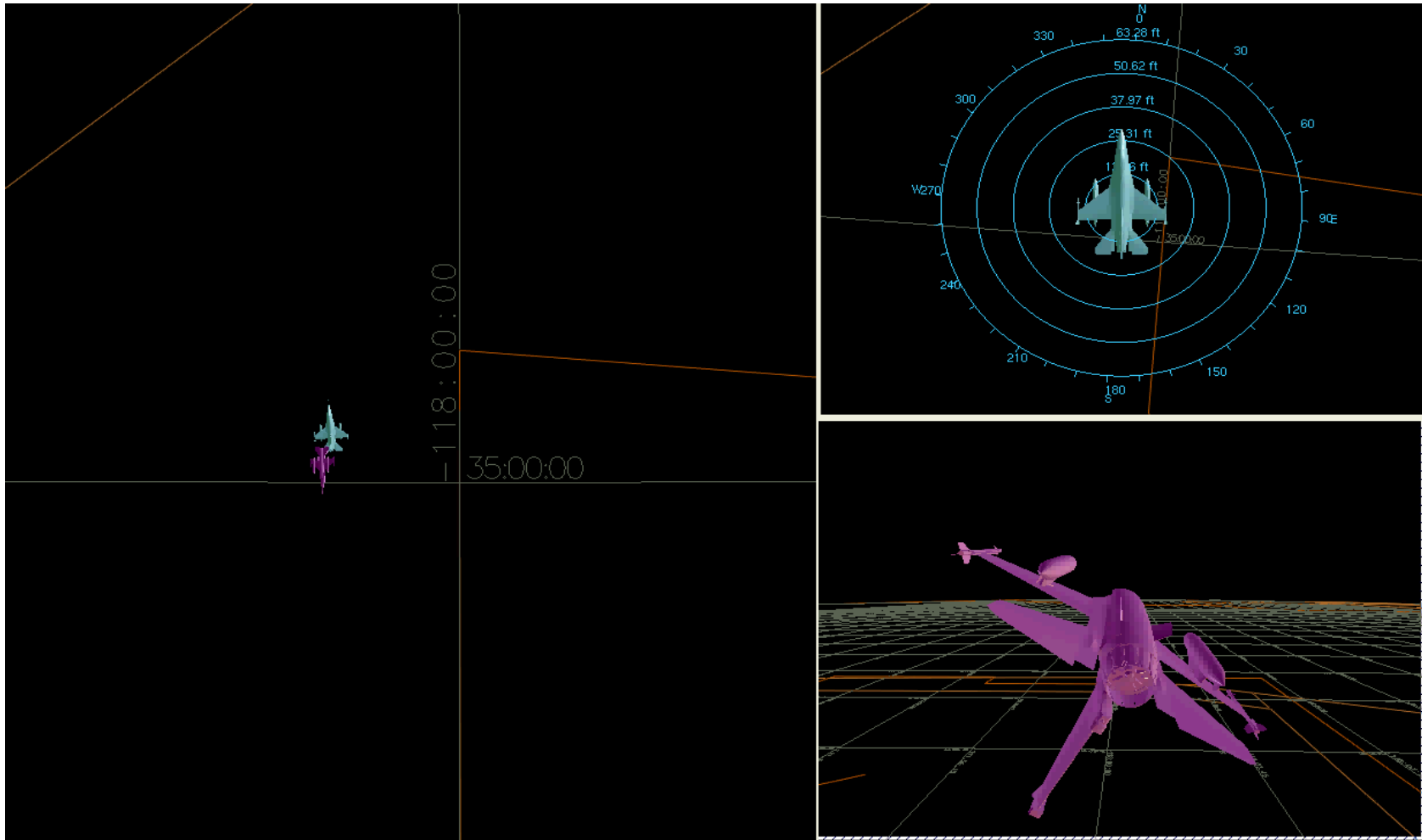
TYPE CODE	NAME	COMMENT
HEAT	Heading	Direction of movement over the earth relative to true north.
YAWD	Heading Deviation	Change in Heading
SPDT	Speed	Rate of movement relative to the ground.
ALTT	Altitude	Height above mean sea level.
CLMD	Climb	Up Deviation in altitude.
DIVD	Dive	Down Deviation in Altitude.
ROLT	Roll	Attitude angle of the wing relative to local level right wing up.
ROLD	Roll Deviation	Deviation in roll positive right wing up.
PITT	Pitch	Attitude of A/C centerline relative to local level, positive nose down.
PITD	Pitch Deviation	Deviation in pitch positive nose up.
WYPT	Waypoint	Geodetic Intercept Point.
FILE	File	Insert script from indicated file.



# CSAD Demonstration



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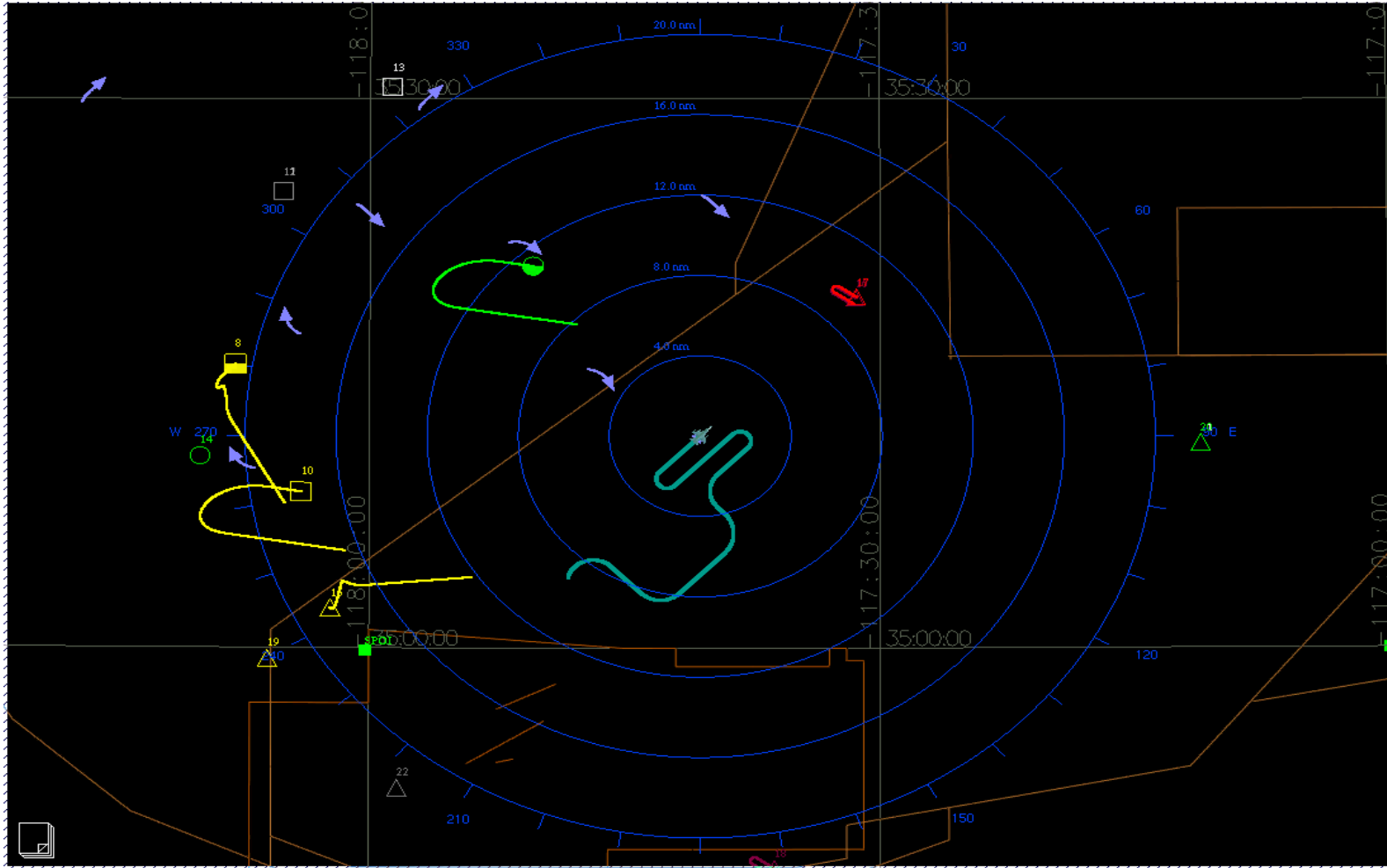


- Video source from internal scenario builder simulator





# CSAD Demonstration



- Video source from internal scenario builder simulator



# Summary



- **Discussed the development of a common situational awareness display**
  - Pointed out the need for it to be more flexible and modularized.
  - Pointed out the approach.
- **Discussed the scenario builder tool**
  - Aid in providing data during development.
- **Finished off with a demonstration of CSA and scenario builder data.**