AFRL
THE AIR FORCE RESEARCH LABORATORY

Air Force Research Laboratory Space Vehicles Directorate
Advanced Research Collaboration and Application
Development Environment (ARCADE)

Space Vehicles Directorate

Be the best and team with the best; Be ahead and stay ahead in Space S&T!

Description of Technology:
ARCADE is an incubator and enterprise of test-bed environments that enable the Space Superiority community to research, collaborate, develop, evaluate, and mature innovative capabilities that are designed for transition to the operational-level Space Control community. Services and products supplied to developers in the ARCADE test-beds include:

- Software development standards, tools, and on-boarding services
- Simulated and scenario-relevant data archives
- Data services (Joint Space Operations Center (JSpOC) Mission System (JMS)-baseline and future JMS)
- Capability evaluation tools

The Air Force Space and Missile Systems Center built JMS to deliver an integrated space situational awareness and command and control capability to support the missions of the Commander Joint Forces Component Command for Space.

The Air Force Research Laboratory initiated ARCADE in 2014 as a cross directorate Space Vehicles and Directed Energy effort to build the development tools and environment for pre-developmental testing for the Space Control community.

To address both capability enhancements of JMS and the desire for an agile acquisition, AFRL and the JMS program created ARCADE to provide future capability developers access to a common environment as a step in achieving a streamlined acquisition process for new Space Control applications and data services.
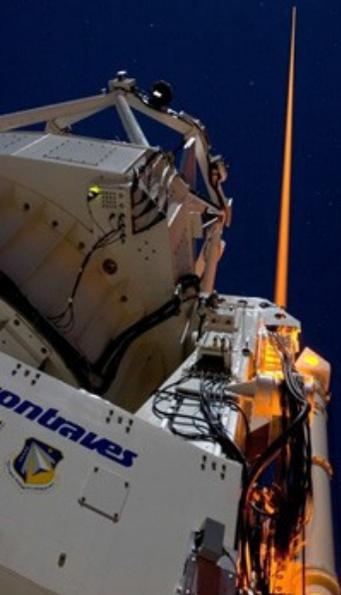
ARCADE facilitates the development of high-impact applications efficiently and bridges the gap between development and integration into the operational JMS enterprise.

The JMS program is working with AFRL to turn ARCADE services into a worldwide asset for Space Control application development
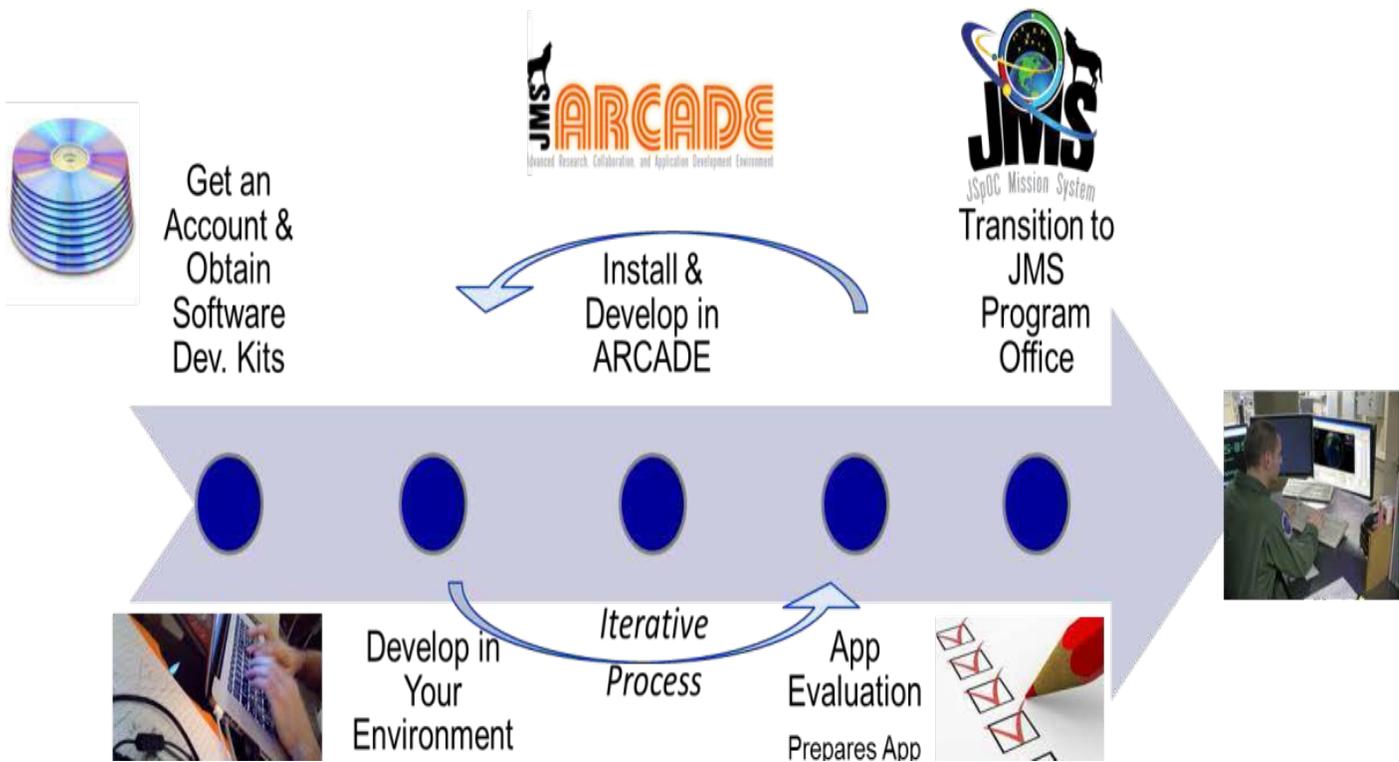
How do Software Developers Mature Their Technology with ARCADE

Get an Account & Obtain Software Dev. Kits

Install & Develop in ARCADE

Transition to JMS Program Office

Develop in Your Environment

Iterative Process

App Evaluation Prepares App

Getting started … request an account type that is right for your technology

The minimum requirements for obtaining an ARCADE account are U.S. citizenship and a "need to know," e.g., association with a United States government agency.

Types	Description	How do you request account?
ARCADE Portal Environment	Hosts simulated and archived operation data, workflow tool, and JMS-user interface web-browser. In the future, will host JMS-service stubs for interface testing.	www.mhpcc.hpc.mil/portal/arcade
ARCADE Service Oriented Architecture Environment	Hosts JMS service, live experimental data, live operation data feeds, software and JMS-user interface development kits.	Email: afrl.rvsv.arcade@us.af.mil