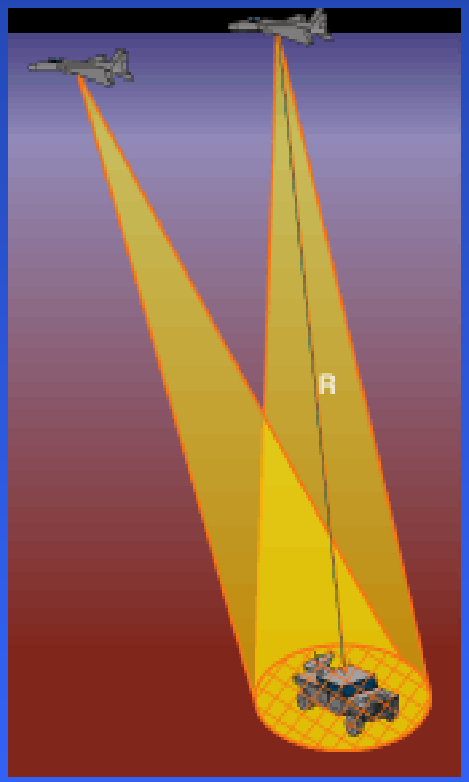
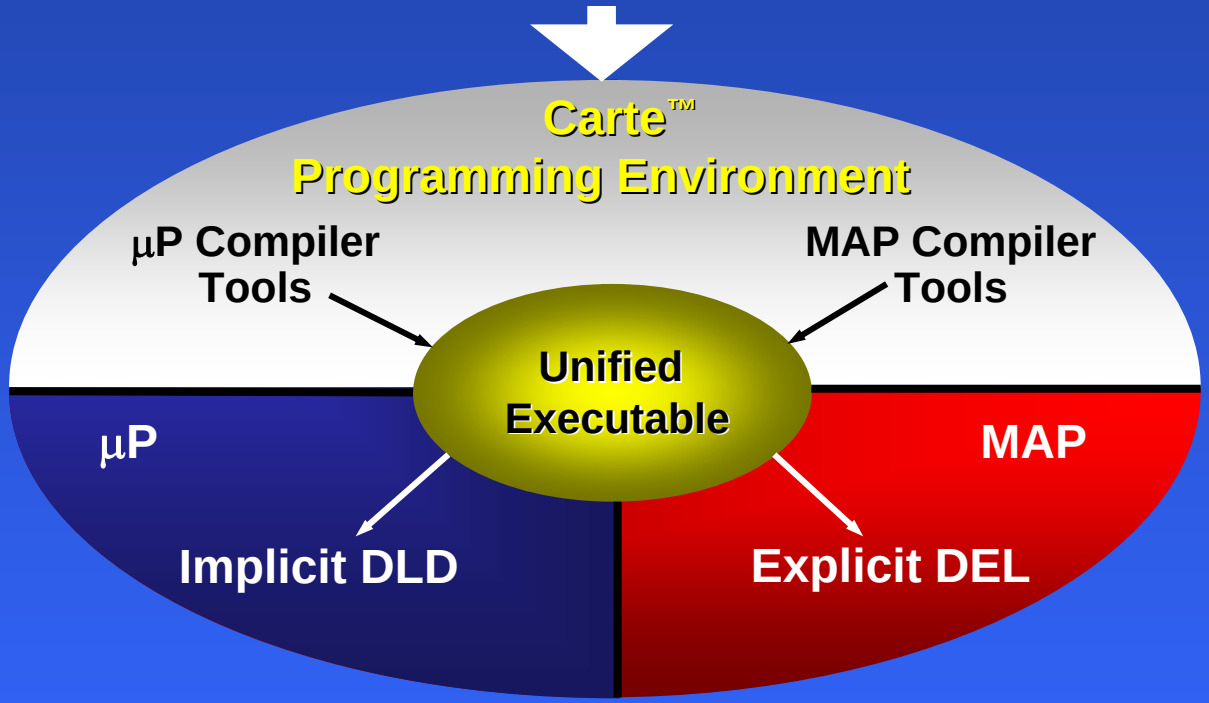
Air Force Research Laboratory
Synthetic Aperture Radar Backprojection



- **Motivation**
  - The warfighter requires visual identification to engage ground targets
  - Optical systems have difficulty at long range and in inclement weather
  - Radars are reliable long range systems
  - SAR Backprojection produces the most accurate long range radar images compared to other image formation processes
- **Problem**
  - SAR Backprojection has the highest computational cost
  - AFRL researchers developing Backprojection algorithms in MATLAB must wait hours to produce an image from gigabytes of Radar data
- **Solution**
  - Reduction of computational time, power and physical volume at the imaging source
- **Result**
  - Real-Time SAR Backprojection will enable higher quality sensors for time critical applications

Unified Applications Environment

Universe of all Software → C or Fortran Source ← Code Written Specifically for MAP®



Unified Program Execution

Standard Network

Linux Operating System

Standard Peripherals

SRC Embedded Solutions