

F-22 Program Office

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F-22 Software Management Strategy



**Software Maintenance
Growth/Opportunities and
Challenges Panel,
DoD Software Maintenance Conf**

Verle Johnson

U.S. AIR FORCE



Purpose/Overview



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F-22 Raptor

- **Purpose: Information Only**
- **What is F-22 SW Management?**
- **Why Consider In-Sourcing?**
- **Background Studies**
- **Consolidation Plan at Ogden Air Logistics Ctr**
- **Summary**



What is F-22 SW Management?



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- **Software Life Cycle Management (SLCM)**

- Development and Sustainment of F-22 software throughout the life of the airframe

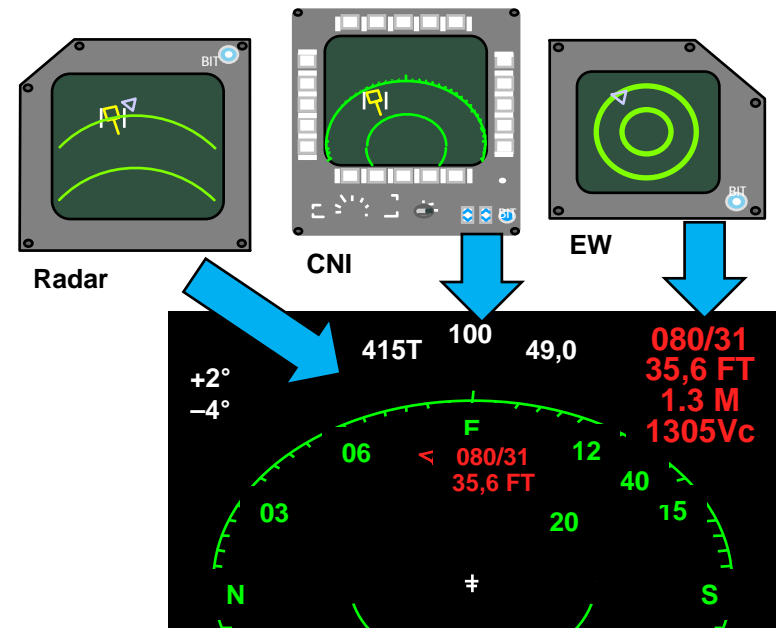
- Who does this today? Lockheed, Boeing & Subcontractors
- How should we develop organic capability?

- F-22 is software intensive

- Integration Avionics
- One Operational Flight Program

- Originally only on-acft (OFP) software was considered

- Training Systems
- Aircraft Maintenance System





Why Consider In-Sourcing?



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- **Law: USC Title 10 Sec 2464**
 - DoDI 4151.20 requires software to be reported in the Biennial Core Computation provided to OSD
- **What is Core?**
 - It is the Air Force position that software required to launch, recover, and maintain AF weapon systems is to be considered a Core capability and must exist organically within the software design, architecture and integration activities of an individual weapon system
 - Must be done by gov't people, using gov't equipment, in a gov't owned and operated facility
- **50/50 – at least half of all depot-level work (by dollar amt) must be performed in a gov't facility**



Background



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- F-22 Software workload declared Core (Sep 02)
- 5 studies conducted from 2005 to 2010 to gain organic capability
 - No clear low cost alternative that met all stakeholders needs
- Consolidation of labs at Prime Ft Worth location proposed
- Jan 11 planning fell apart with prime decision not to play
 - “Business case driven”
- Feb 11 Program office initiative to consolidate at Ogden ALC
 - Forced quick reaction with limited planning to maintain capacity
 - Budget driven – no overnight solution
 - Did allow an opportunity to make small improvements to lab
 - Need more in-depth planning going forward

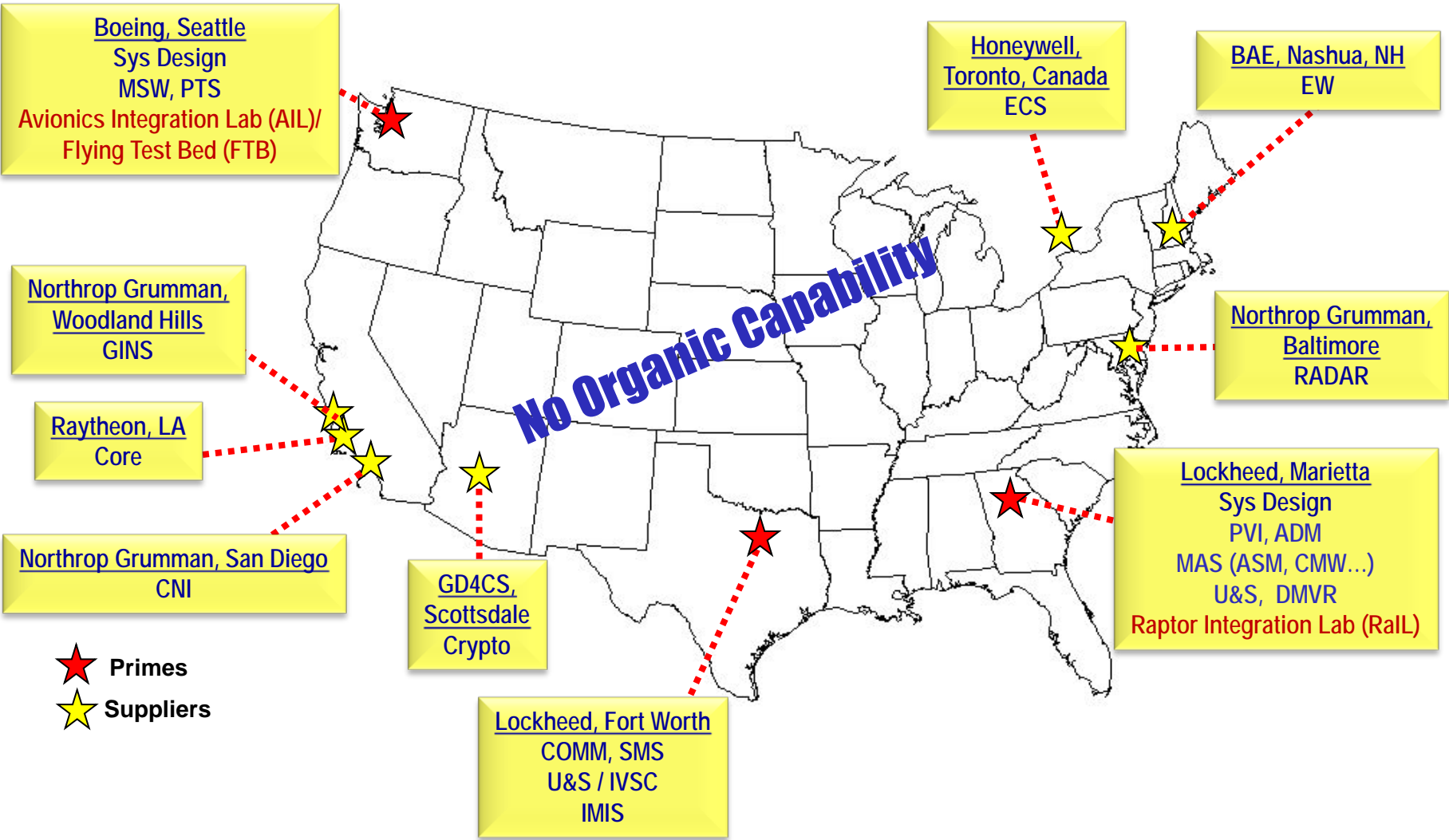


Starting SW Management Environment



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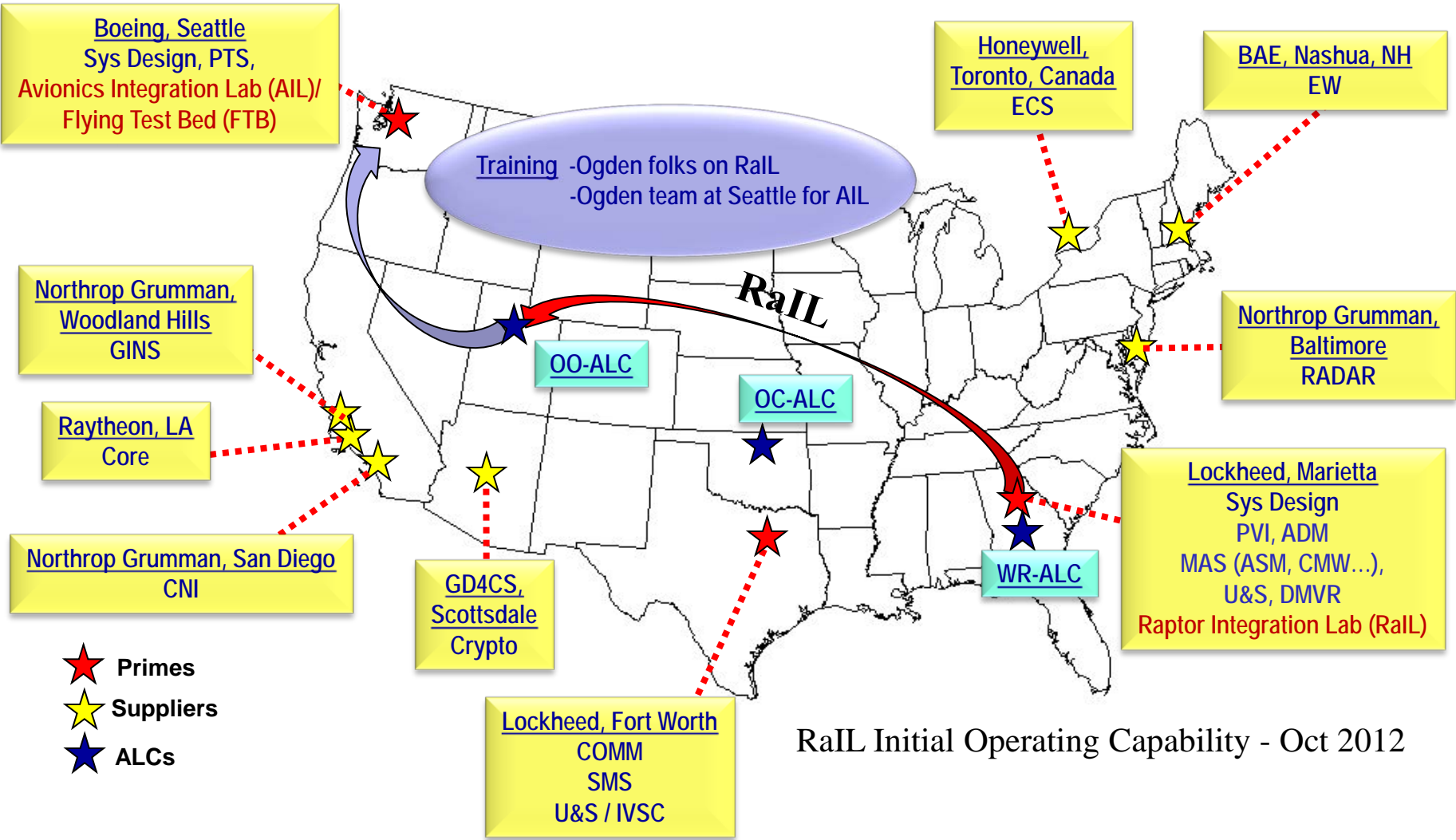


Step 1: Move Raptor Integration Lab (RaIL) to Ogden ALC



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RaIL Initial Operating Capability - Oct 2012

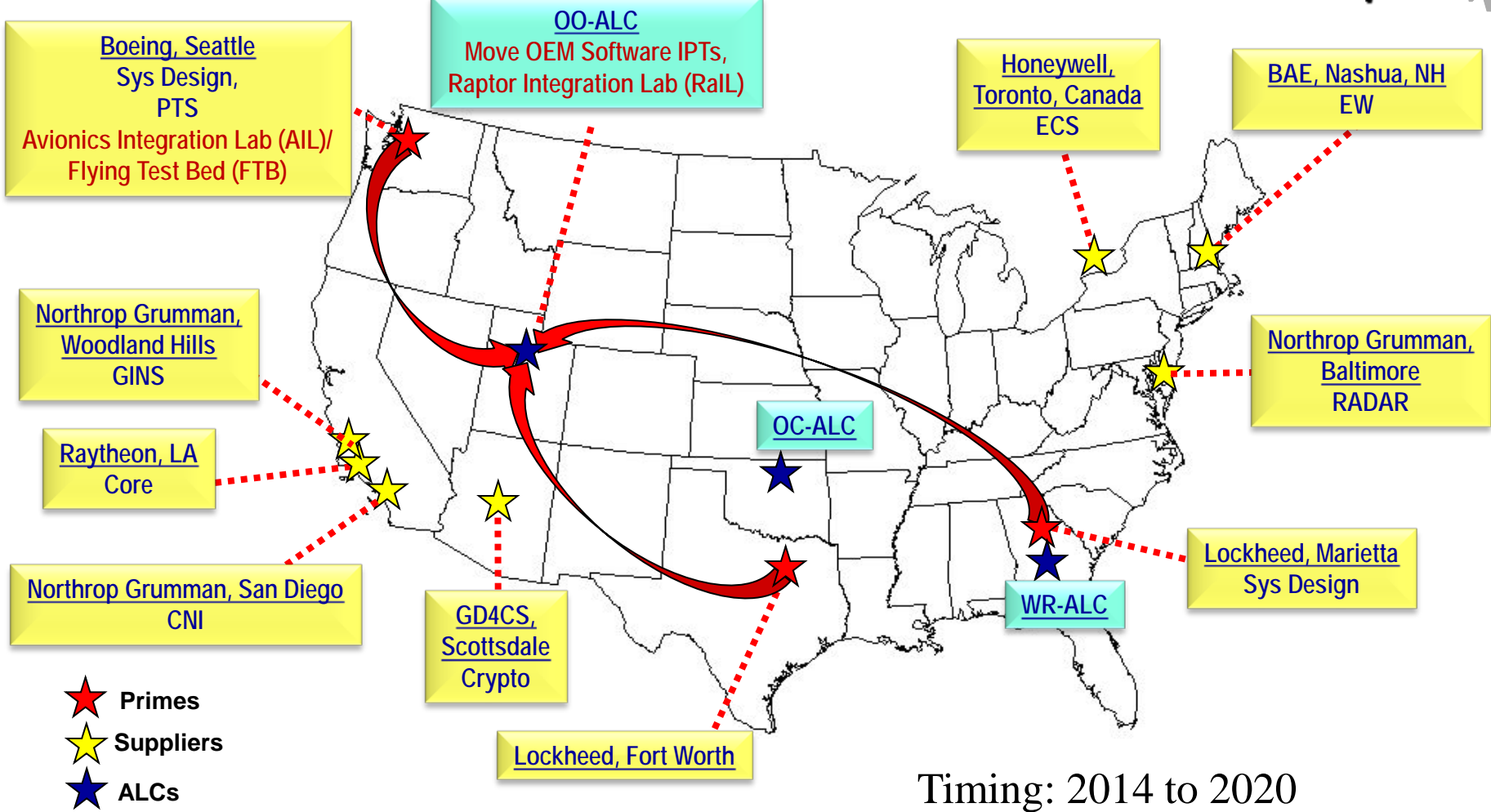


Step 2: Consolidate OEM SW Development IPTs at Ogden



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Timing: 2014 to 2020

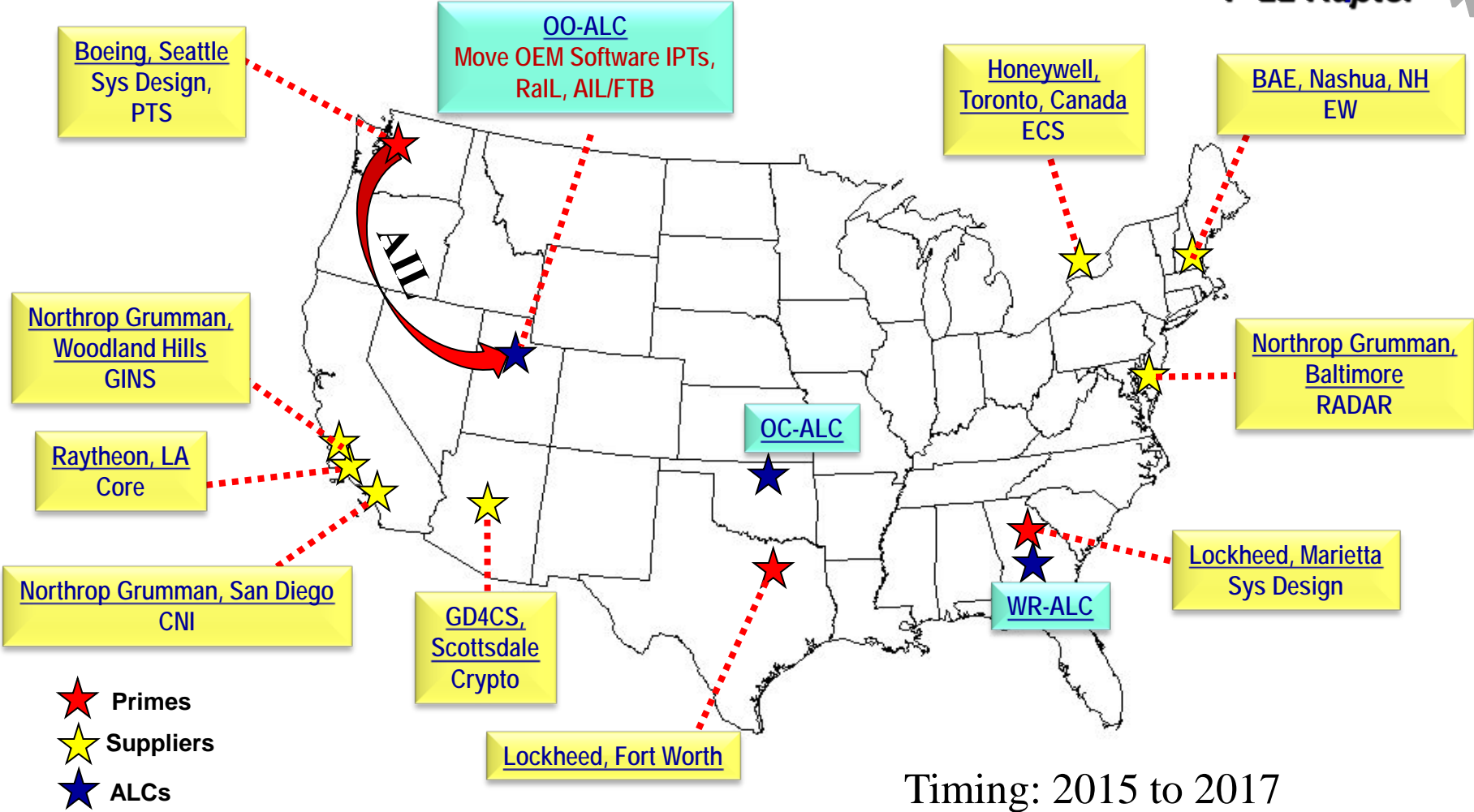


Step 3: Move AIL and Team to Ogden



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Timing: 2015 to 2017



Summary



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- Long twisted path to present plan
- More planning and use lessons learned going forward
- Leverage the best of public and private sector
 - Prime experience with F-22 avionics and software
 - Ogden recognized software excellence (CMMI level 5)
 - Fresh start with opportunities to make improvements
- Challenges galore
 - Must have clear communication
 - Multiple locations
 - Must have clear expectations
 - Increase planning for future steps
 - Train organic team with clear target workload
 - Preserve human capital
 - Keep contractor team producing while growing organic team to the 50/50 target

KEEP F-22 ACQUISITION EFFORTS ON SCHEDULE WHILE BUILDING AN EFFECTIVE SOFTWARE MAINTENANCE STRUCTURE