

M&R DEX

Update and Path to Implementation

Concepts and Plans
A National Center for Manufacturing Sciences
Project
September 2012

Problem Statement

- Declining defense budgets
- Limited strategic and theater mobility
- Increasing asymmetric threats to vehicle convoys, sea and air transport capabilities
- Diverse arrays of equipment that need logistical support:
 - Maintenance
 - Servicing
 - Supply support
- National or service-based information systems that are incompatible

Resolution

- Integrate Logistics capabilities across joint services, allied forces, and commercial industry
 - Increase utility of deployed maintenance capabilities and supplies
 - Reduce “redundant redundancy”
 - Reduce deployment footprint
 - Reduce in-theater transportation requirements
 - Reduce in-theater management and inventory requirements of stocks
 - Capitalize on investments in equipment interoperability and commonality of parts
- Improve ability for organizations to:
 - “Cross-service” each other <OR>
 - Form combined logistics organizations (i.e. FOB maintenance or supply)

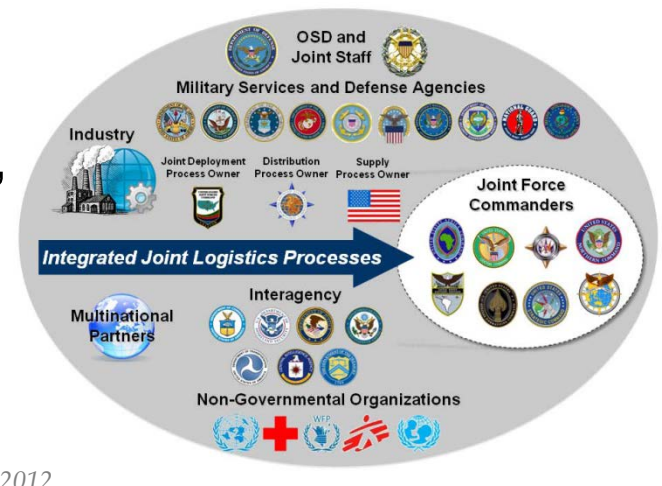
Policy & Guidance

2012: U.S. Presidential guidance states: “In this resource-constrained era, we will also work with NATO allies to develop a “Smart Defense” approach to pool, share, and specialize capabilities as needed to meet 21st century challenges”***



2012: US Offers to be Lead Nation for 7 Multinational Approaches (MNA) Task Force “Smart Defence” projects**

2010: US Joint Staff “Joint Logistics Enterprise**” requires mutual support to Multinational Partners and use of Standard Data



*Joint Concept for Logistics, 6 August 2010

** DEPSECDEF Carter Letter to NATO Supreme Allied Commander for Transformation, 23 Jun 2012

*** Sustaining U.S. Global Leadership: Priorities for 21st Century Defense, January 2012

Methods

- Standardize data exchanges to allow transactions and Serialized Item Management (SIM)
 - Allows each organization to use existing Automated Information System (AIS)
 - Use defined standards as the foundation of these exchanges
 - Provide rich, relevant data to support decisions across the enterprise
- Enable advertisement for available logistics services or supplies
 - Advertise excess or shareable supplies or services
 - Broadcast deficiencies to potential suppliers
 - Integrate advertisement with transactions in supply, maintenance or financial AIS
- Extend flow of data beyond Logistics community to overall Command and Control (C2) to support collaborative planning and decision support

Overall CLI/JLI concept

Coalition/Joint Logistics Interoperability (CLI/JLI):

- Develop and demonstrate interoperability of data between Marine Corps, Joint, and Coalition (NATO) AIS related to equipment accountability, status, and maintenance
 - Supply Chain integration would be a bonus
- Goal is to achieve interoperability between 3 relevant, defined information models and exchange standards, not between AIS
 - PLCS for Life Cycle Management
 - TSOA for Marine Corps C2/Ops
 - OLCM for NATO Logistics/C2

Maintenance & Repair

- Business DEX developed using AP239 ed2
- Highly leveraged UK MOD Aviation Maintenance DEX
- Intent is to increase the availability of data exchange between owner/operator and maintenance facility
 - Field and Depot Maintenance
 - Commonly use different AIS and share little electronic data
- Benefits to Maintenance:
 - Knowledge of item configuration, usage, fault and field maintenance history before it arrives at the facility
- Benefits to Owner:
 - Capture of work performed, changes to configuration and actual failures

Maintenance & Repair: PLCS

Operator

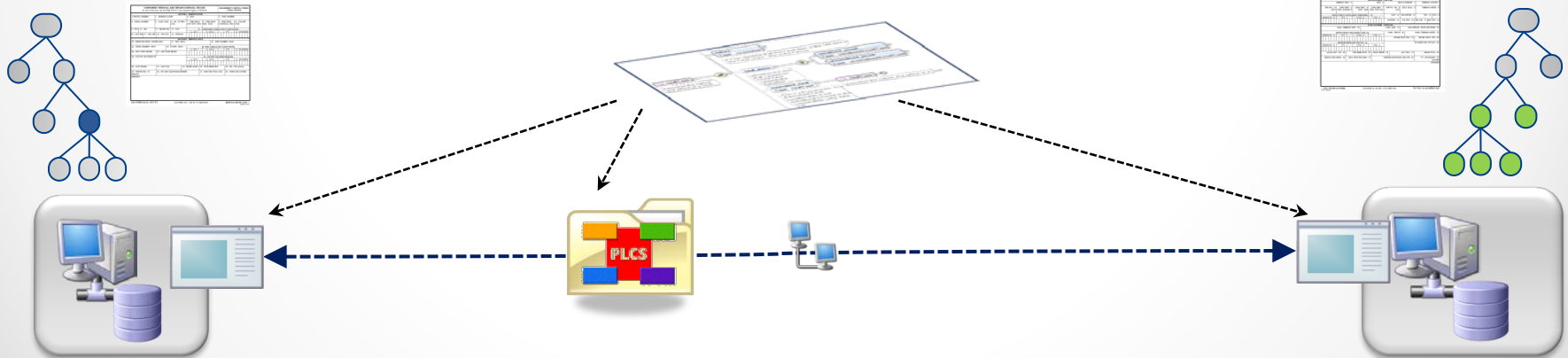


Maintainer

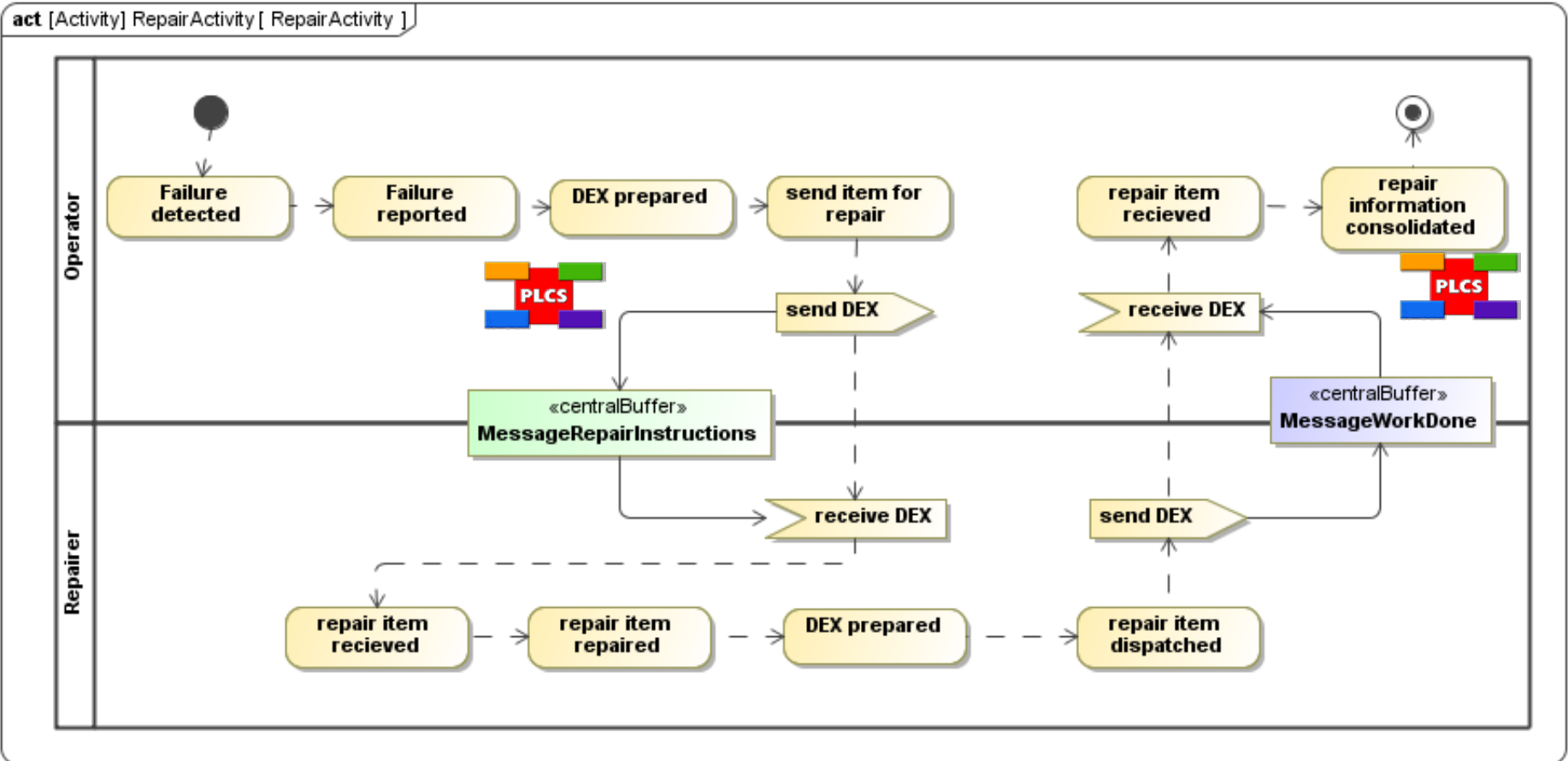


PLCS DEX

A Data Exchange Specification



DEX fit with Business Process



Information is communicated using a subset of PLCS expressed in XML
 Approach is independent of the applications used at either end of the
 • exchange

CLI 2013: "Pond to Pond"

