

Interoperable Architecture for Command and Control

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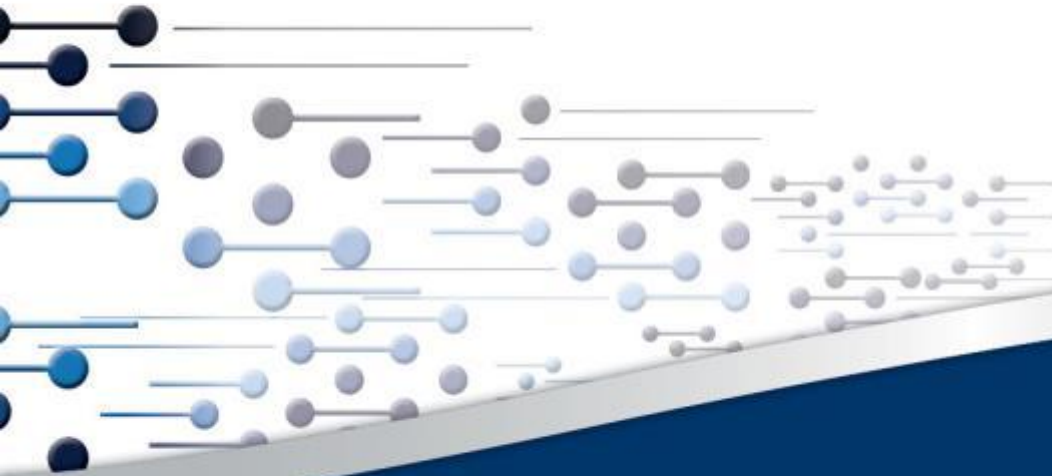
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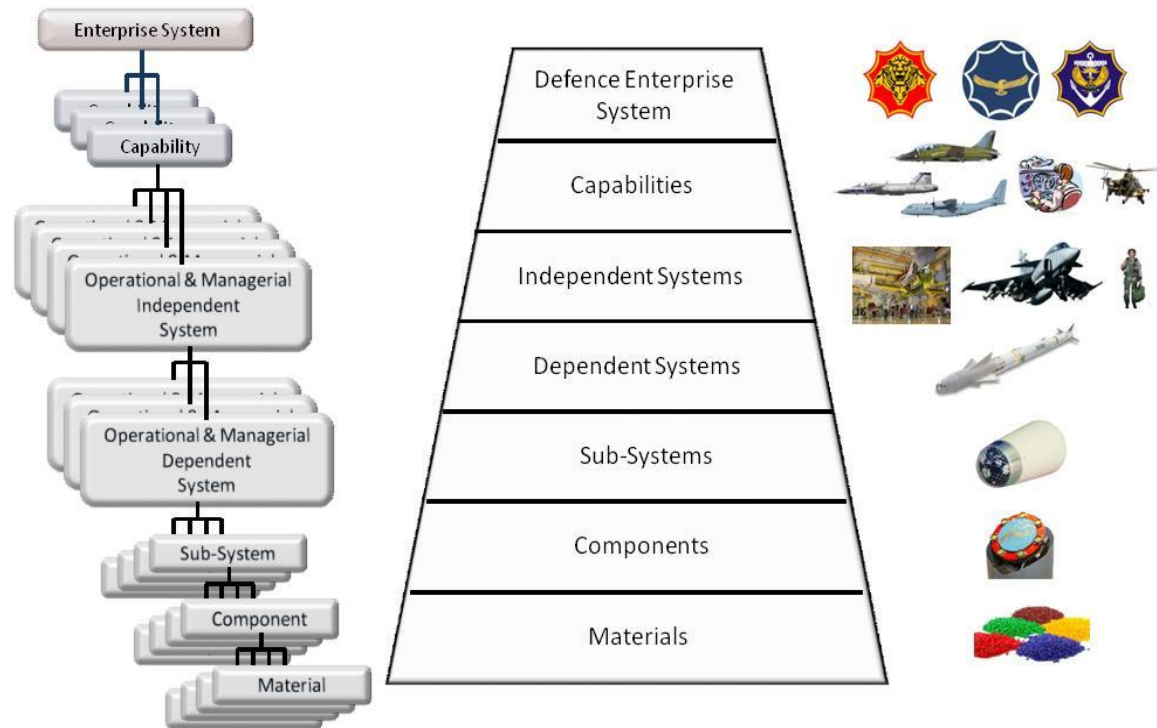
our future through science

Contents

- 1. Introduction**
- 2. Common architecture development approach**
- 3. Common Information Exchange Architecture**
- 4. CIEA concept experimentation**
- 5. CIEA experiment results**
- 6. Data Link Processor concept**

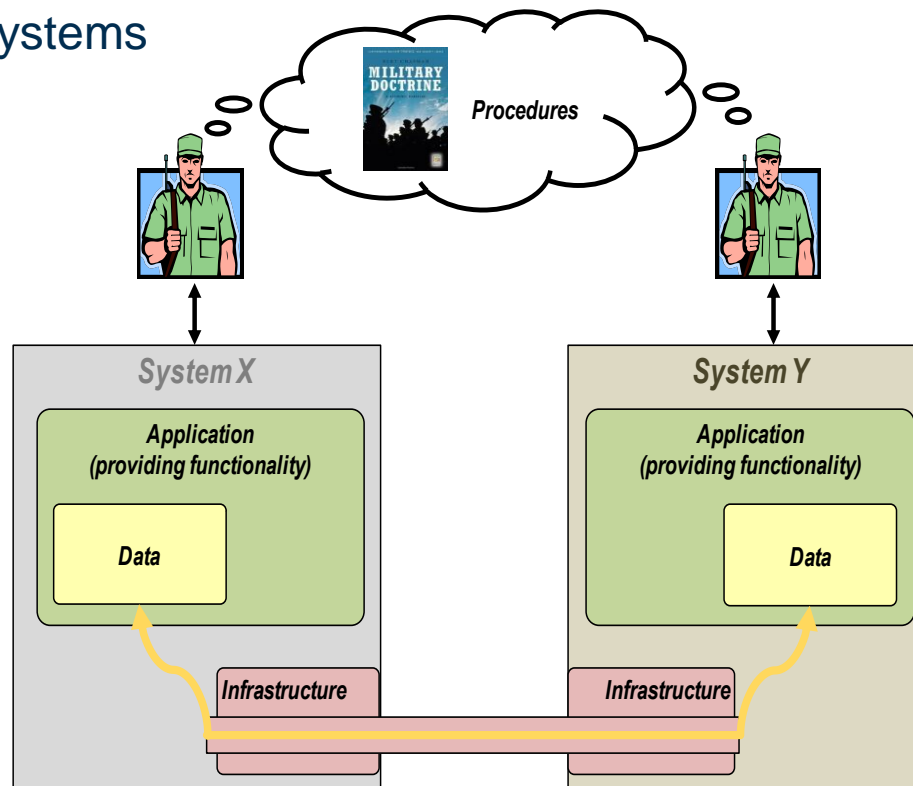
Introduction

Traditional Engineering Approaches



Common Architecture Development Approach

- Defence Forces forced to re-think systems development
- Move towards common building blocks emerging
- Building blocks are expected to conform to a common architecture
- Common Information Exchange Architecture (CIEA) could expedite the integration of systems



CIEA must address:

Interoperability : Flexibility : Shorten Acquisition Time

Data States

Data-in-Use

Data-in-Rest

Data-in-Motion

Common Information Model

Object-orientated (inheritance)

Resource Description Framework

Standard Information Formats

Tags for semantic meaning

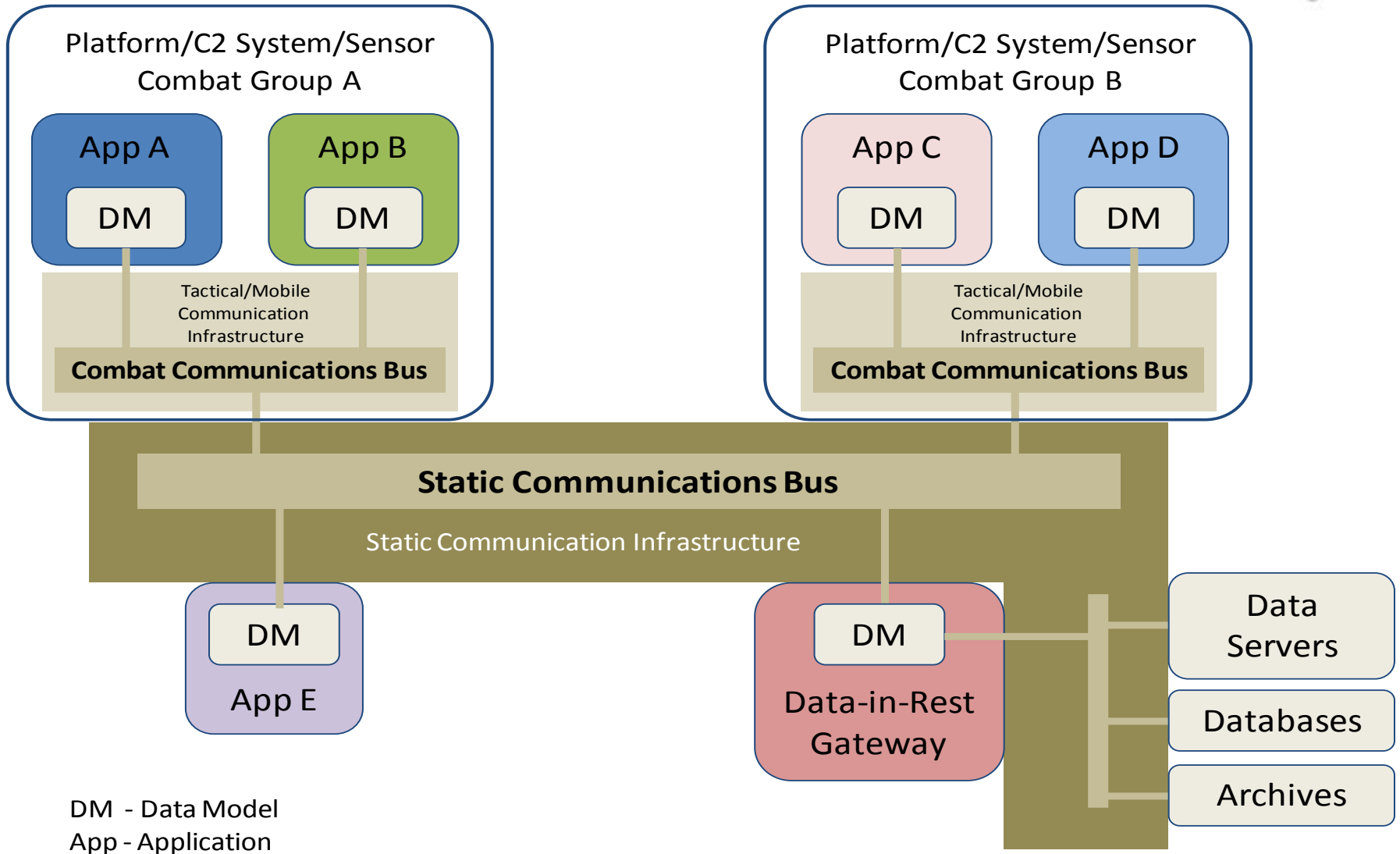
Communications

Combat communications bus

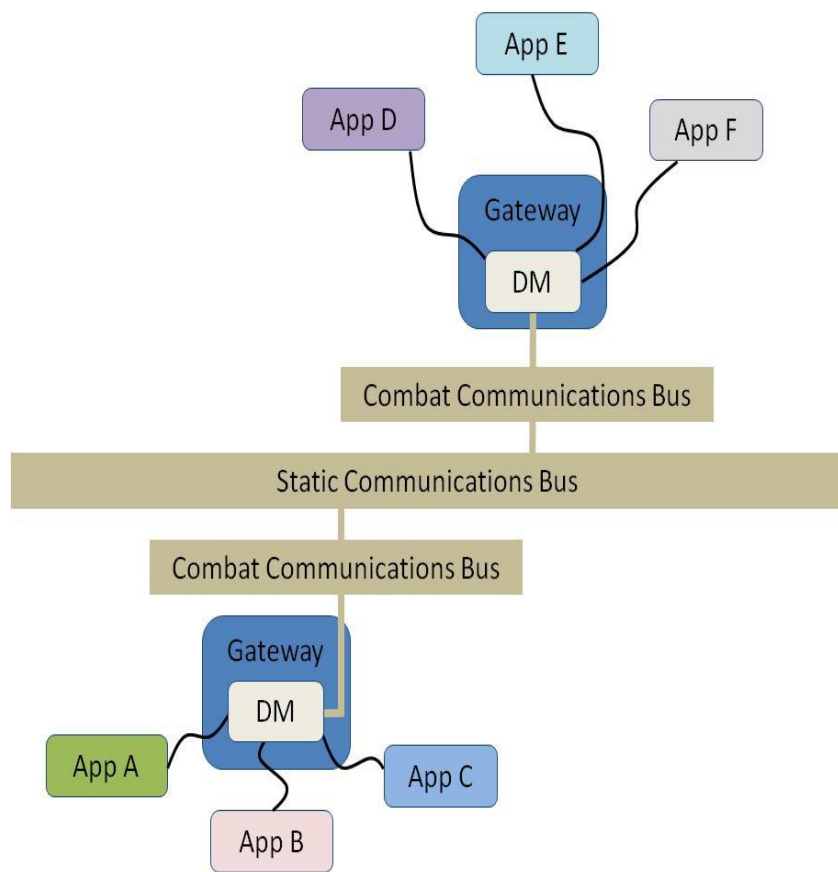
- clever routing

Static communications bus

Common Information Exchange Architecture

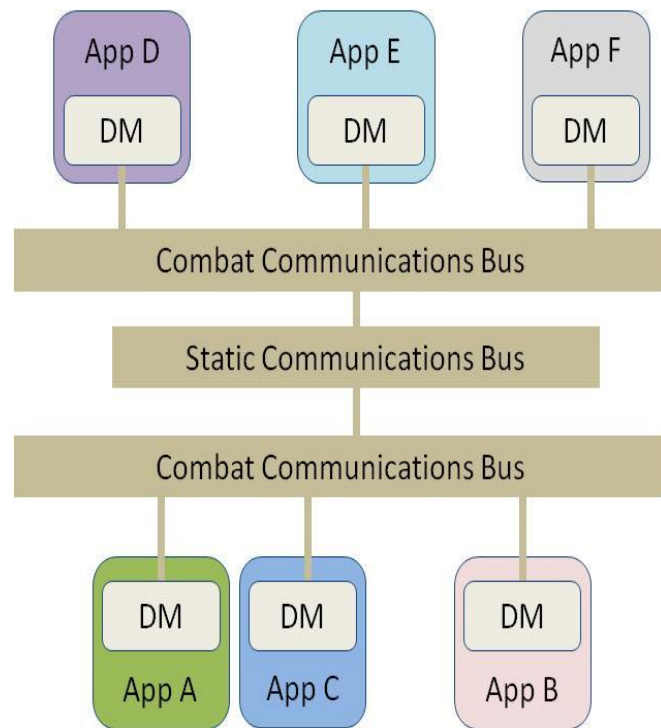


Common Information Exchange Architecture: Experiment



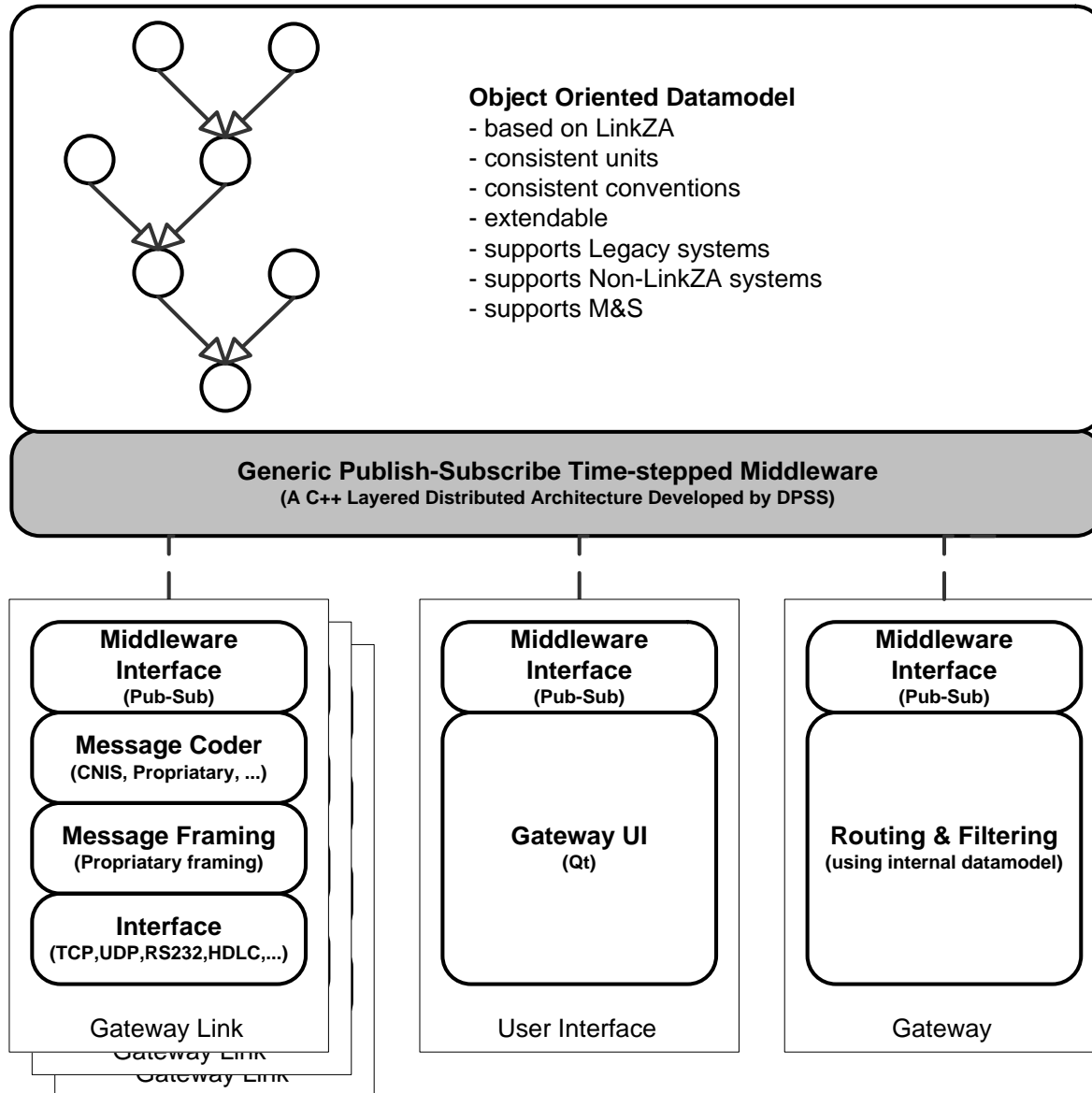
Gateway experimental set-up

Gateway experimental implementation to validate the CIEA

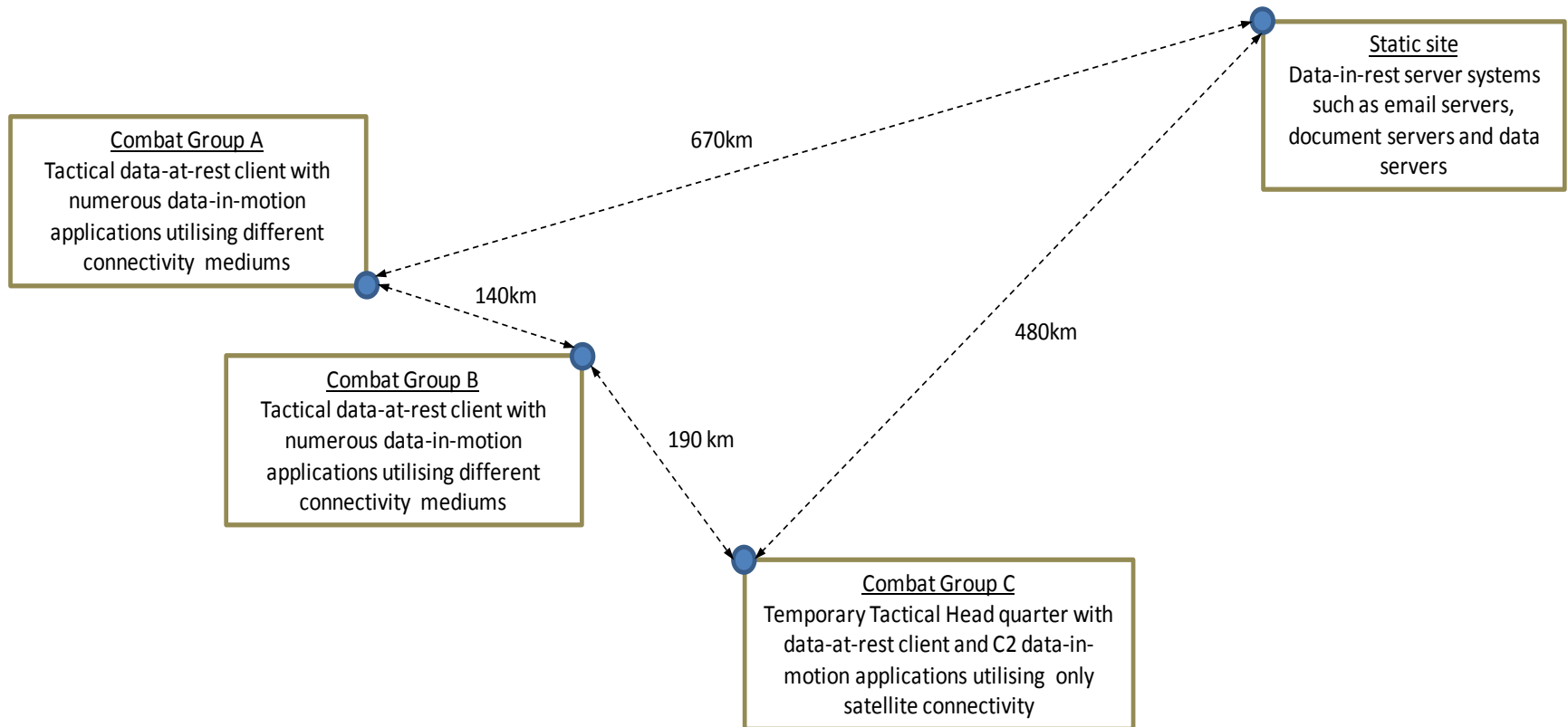


Comparative CIEA

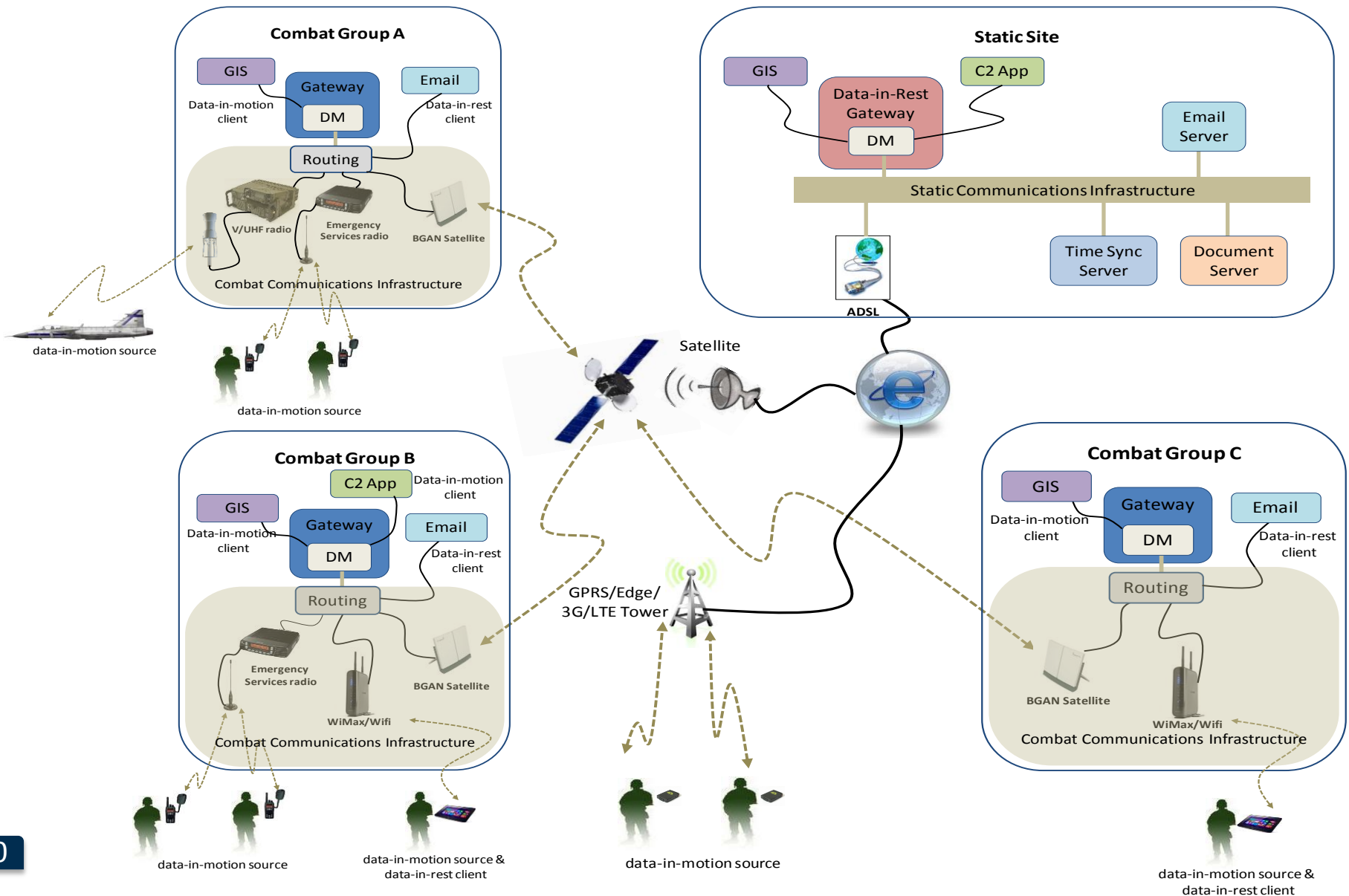
Common Information Exchange Architecture: Experiment



Common Information Exchange Architecture: Experiment



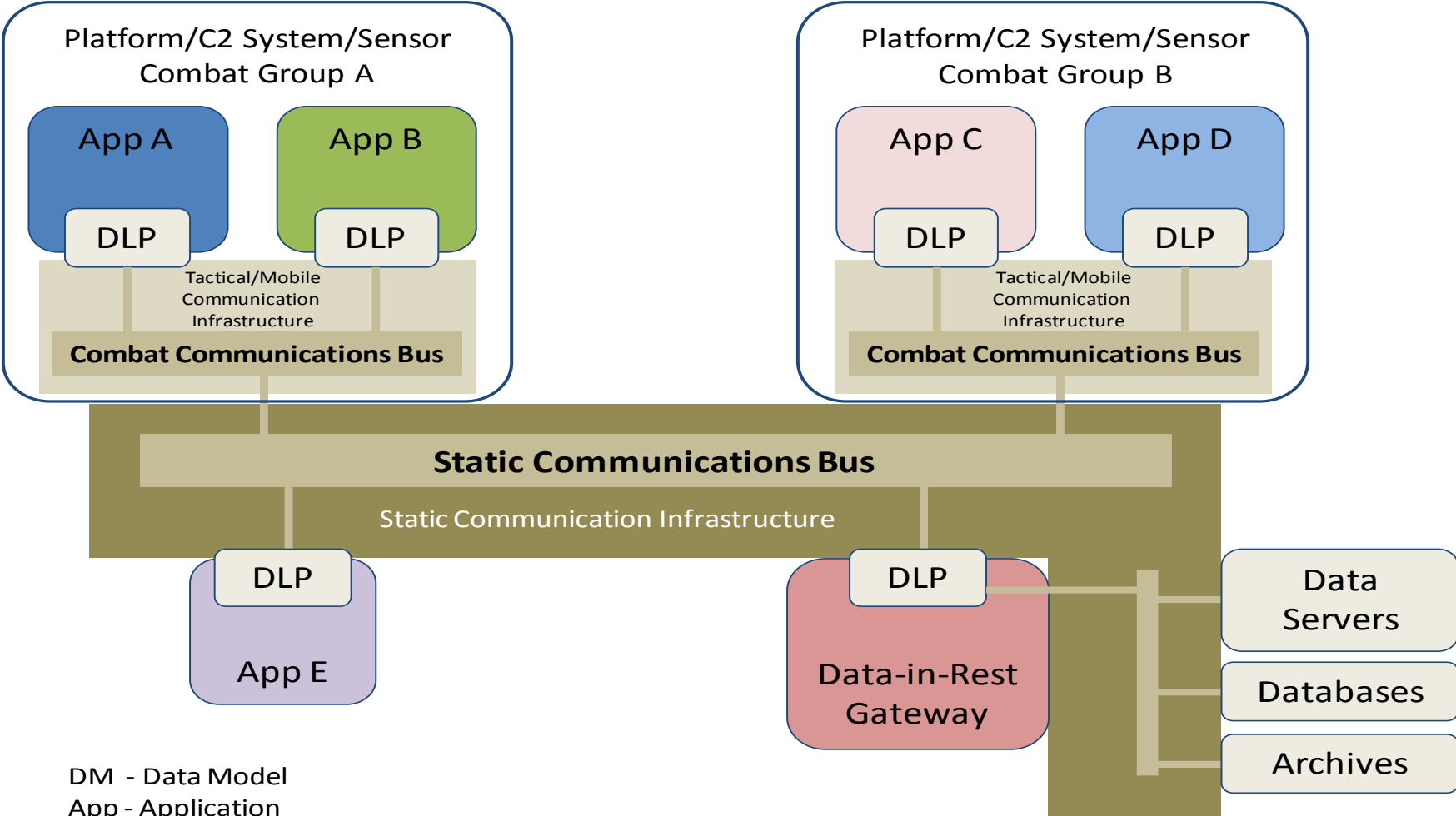
Common Information Exchange Architecture: Experiment



Common-Data Model Enables

- Integration of Data-in-Motion sources
- Integrations of legacy systems via gateway
- Flexibility
- Data Filtering Enabled
- Decision rules can be applied

Common Information Exchange Architecture



DM - Data Model
App - Application



Thank you