



**Battle Lab Simulation  
Collaboration Environment  
(BLSCE):  
Multipurpose Platform for  
Simulation C2**

# BCBL (GORDON) MISSION TASKS

- **Support all TRADOC** battle labs and proponents in experimentation / CD functions across the Future Force mission areas
- Execute battle command and branch proponent **experimentation & technology assessments to bridge** capability gaps
- Manage the **BLCSE NOSC** (fixed/deployable assets, Joint/Strategic gateways)
- Provide **risk mitigation for acquisition** PMs (WIN-T, JTRS, FCS, SATCOM, ACUS MOD, FF BC, IA & Security Products) -“**Honest Broker**” role for the **evaluation of C4 solutions** (proposed by vendors, et al)
- **Deploy advanced communications** networks to **support live force** play in exercises and demonstrations (Army & Joint)
- Provide the Army’s **conduit for the rapid integration** / fielding of advanced C4 technology ( current & SBCT forces)
- Execute experimentation in area of Homeland Defense C2 & Force Protection
- Provide the means and standards to integrate **Communications / Network Realism into Warfighting Modeling and Simulation Tools**  
– TRADOC’s V&V agent for comm realism / comm effects M&S



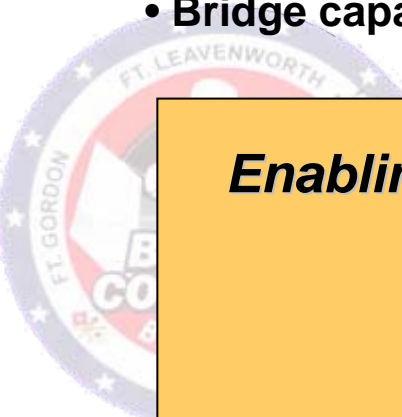
# Purpose and Characteristics

The **Battle Lab Collaborative Simulation Environment (BLCSE)** is a **permanent, secure, scalable**, complex, and distributed “toolbox” capable of supporting multiple models and **constructive, virtual, and human in the loop** simulations. It enables **distributed experiment planning, execution and analysis** essential to the Army Concepts Integration Center (ARCIC) work in Capabilities Integration, Force Design, Doctrine, Organizational Integration, Modularity, and SBCT/Current Integration.

- Minimizes travel and physical aggregation of participants and equipment
- WAN-based collaborative tool kit, secure video-teleconferencing, voice-over-IP (VOIP), and a tailorable suite of federated simulations
- Supports near-real-time analyses that underlies the basis of challenging decisions associated with the future path of Army and Joint warfighting capabilities
- Facilitates an integrated arms approach to experimentation
- Links TRADOC Schools and Centers SMEs with Joint Forces Command (JFCOM), the TRADOC Analysis Command (TRAC), the Army Materiel Command's Research, Development and Engineering (RDE) Command and the FCS Lead Systems Integrator

# ***BATTLE LAB COLLABORATIVE SIMULATION ENVIRONMENT (BLCSE)***

- **TRADOC Battle Labs & Branch proponents digitally networked & integrated.**
  - Enable collaboration, routine virtual teaming (voice, VTC, whiteboard, & TKN)
  - Enable distributed M&S, link Warfighting simulations and experiment events
  - Deployable network for experimentation / integrating virtual & live Force play
  - Gateway for Joint experimentation / link to DCEE, JTEN and other Service/Agency labs
  - Gateway to technology base ( CECOM, SPAWAR, etc) & industry
- **Integrated environment to support development of systems-of-systems combined arms capabilities across the Army and in support of Joint operations, optimized for development of the future force:**
  - Validate / refine CDDs, CPDs, MNS, etc via secure collaboration
  - Bridge capability gaps between Current, Modular, Stryker, FCS-equipped



***Enabling Network-Centric Experimentation within TRADOC  
and Execution of BLCSE NOSC Functions  
are Key Roles For SIGCEN***

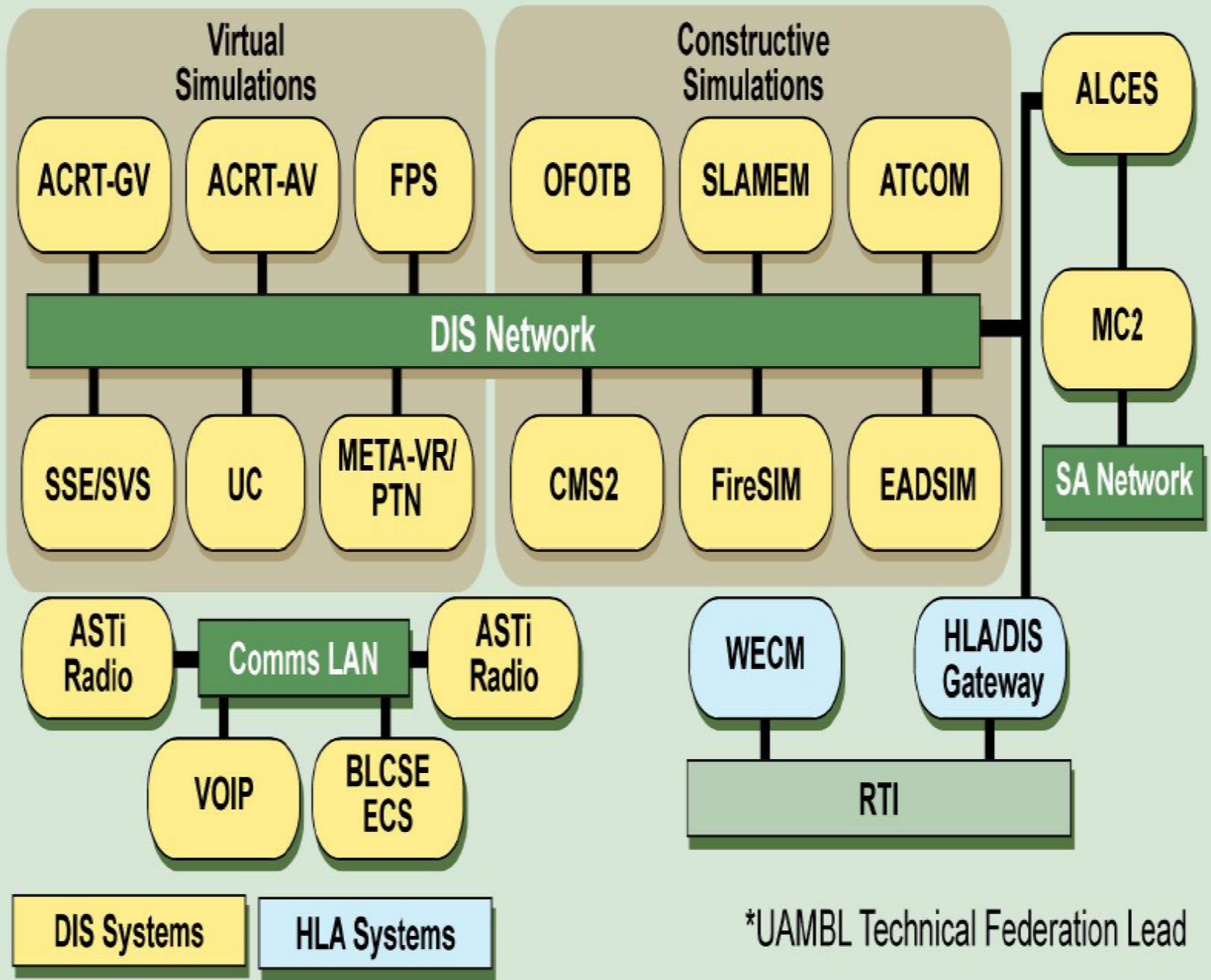
# Constructive (M&S)

<p>Objective Force OTB (OFOTB) (Knox, Benning, Lee, Leavenworth)</p>	<ul style="list-style-type: none"> <li>• Primary SAF for BCT-size entities.</li> <li>• Mounted and dismounted SAF</li> </ul>
<p>Aggregate Level Command and Control (C2) Environment Server (ALCES) (Knox)</p>	<p>Communications bandwidth and connectivity.</p>
<p>Advanced Tactical Combat Model (ATCOM) (Rucker)</p>	<ul style="list-style-type: none"> <li>• 6-degree-of-freedom flight performance</li> <li>• Static and dynamic radar signatures</li> <li>• Future combat systems analyses.</li> </ul>
<p>Fire Simulation (FireSimXXI) (Sill, Knox, Leavenworth)</p>	<ul style="list-style-type: none"> <li>• NLOS Fires</li> <li>• Weapons/target allocation</li> <li>• Target acquisition sensors, automated command and control systems, ammunition, and delivery platforms</li> <li>• Input processor, the main simulation, and a post processor</li> </ul>
<p>The Simulation of the Locations and Attack of Mobile Enemy Missiles (SLAMEM™) (SMDC)</p>	<ul style="list-style-type: none"> <li>• Multi-Sensor Fusion</li> <li>• Satellites</li> <li>• SIGINT</li> <li>• Video Sensors</li> <li>• MSL Launch Detection</li> <li>• A/C and UAVs</li> <li>• Roving Optical Sensors</li> <li>• Post Processing</li> <li>• Unattended Ground Sensors (UGS)</li> </ul>
<p>Extended Air Defense Simulation (EADSIM) (SMDC, Bliss)</p>	<ul style="list-style-type: none"> <li>• Surface-to-air missiles</li> <li>• Ballistic missiles</li> <li>• Cruise missiles</li> <li>• Aircraft</li> </ul>
<p>Warfighter Electronic Collection and Mapping (WECM) (SMDC)</p>	<ul style="list-style-type: none"> <li>• Soldier system level SIGINT emitters (mobile and cellular) collection and mapping capability.</li> </ul>





# Current BLCSE Simulation Federation



\*UAMBL Technical Federation Lead

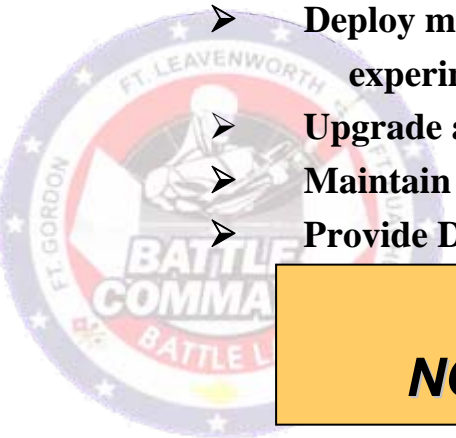
# ***BLCSE NOSC FUNCTIONS***

**Manage BLCSE fixed infrastructure, deployable assets, Joint & strategic network gateways to support all TRADOC experimentation:**

## **BLCSE Network Operations & Security Center (NOSC) functions:**

- **Establish all connectivity between Army battle labs and other DOD networks as required. Network Mgt; manage PRI / DREN network support, bandwidth, & connectivity between battle labs, support spokes, & industry partners**
- **Bridge as required DREN network, PRI network, deployable network nodes & establish VLANs, & network addressing / routing between battle labs as required**
- **Engineer & manage WAN backside Router / LAN connections as required at all sites**
- **Engineer & manage VoIP phone system across BLCSE .**
- **Manage crypto / security plan / IATOs / accreditation process**
- **Manage VTC conference servers and VTC equipment at all sites**
- **Provide instrumentation to measure bandwidth utilization ( within test beds and across distributed network)**
- **Deploy mobile assets as required for the linkage of live forces and/or Joint experimentation**
- **Upgrade and maintain technological currency of deployable network assets**
- **Maintain Joint / Strategic network gateway (DISN-LES)**
- **Provide DA Civilian network engineers and/or contractor support as required**

***Execution Of BLCSE  
NOSC Functions Is A Key Role For BCBL(G)***



# ***BLSCE MANAGED EQUIPMENT***

***All BLSCE NETWORK HARDWARE & ENCRYPTION IS MANAGED CENTRALLY THROUGH FT GORDON BATTLE LAB TO INCLUDE THE FOLLOWING:***

- **22 KG-175 E100 IP TACLANES**
- **2 KG-175 ATM TACLANES**
- **4 GROUPTech KIV-19 TRUNK ENCRYPTORS**
- **35 CISCO ETHERNET SWITCHES**
- **18 CISCO 3700 SERIES ROUTERS**
- **18 INTRUSION DETECTION SENSORS**
- **18 IP VIDEO CONFERENCE TERMINALS**
- **148 CISCO 7900 SERIER IP PHONES**
- **2 CISCO CALL MANAGERS**
- **2 CISCO VIDEO CONFERENCE SERVERS**
- **2 WEB PORTAL SERVERS**
- **2 EF DATA SATELLITE MODEMS**

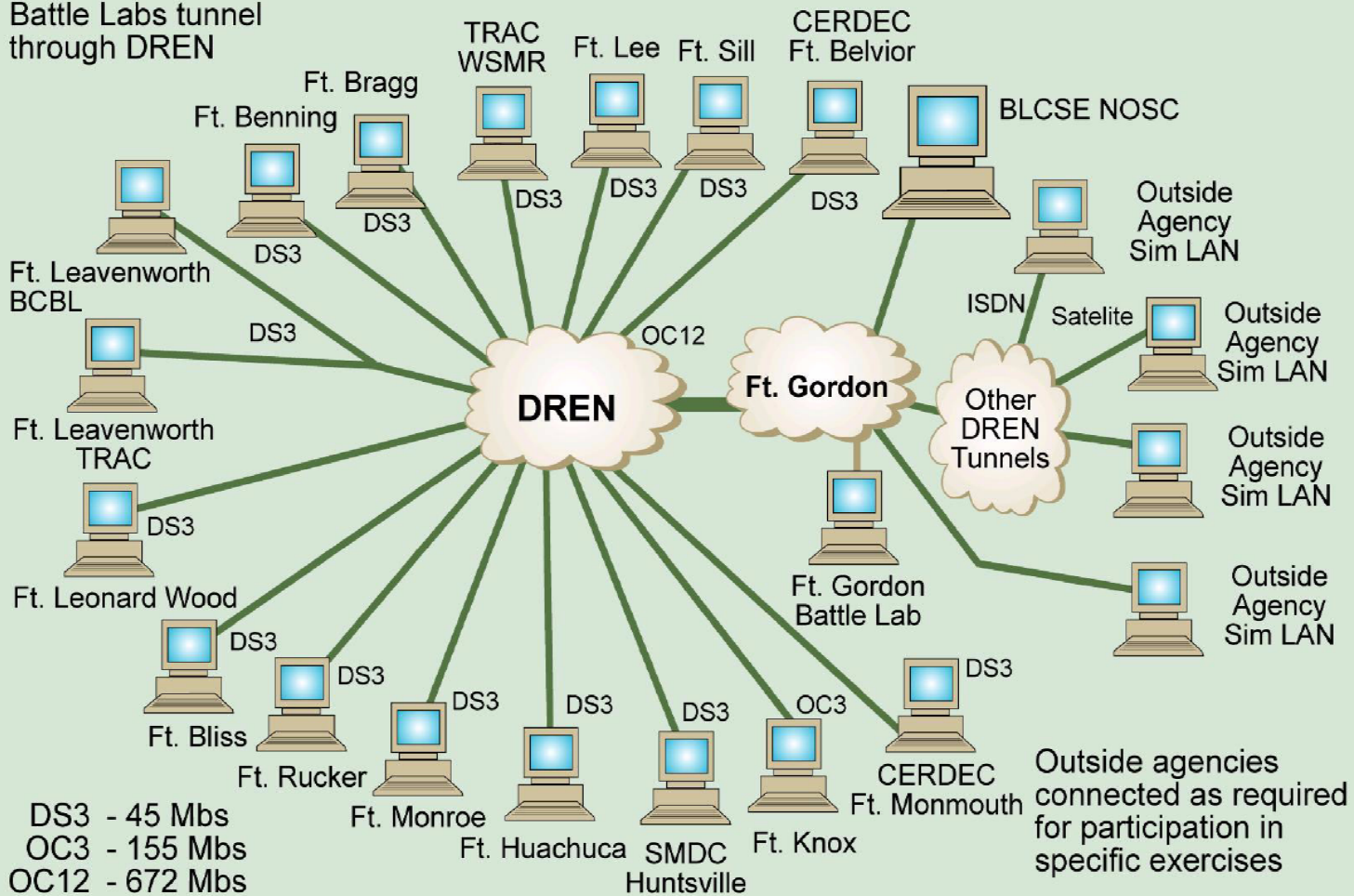






# Network Architecture

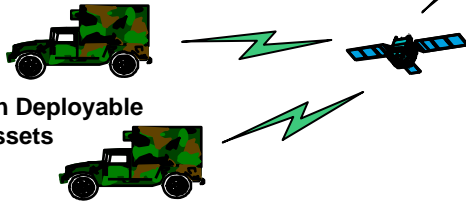
Battle Labs tunnel through DREN



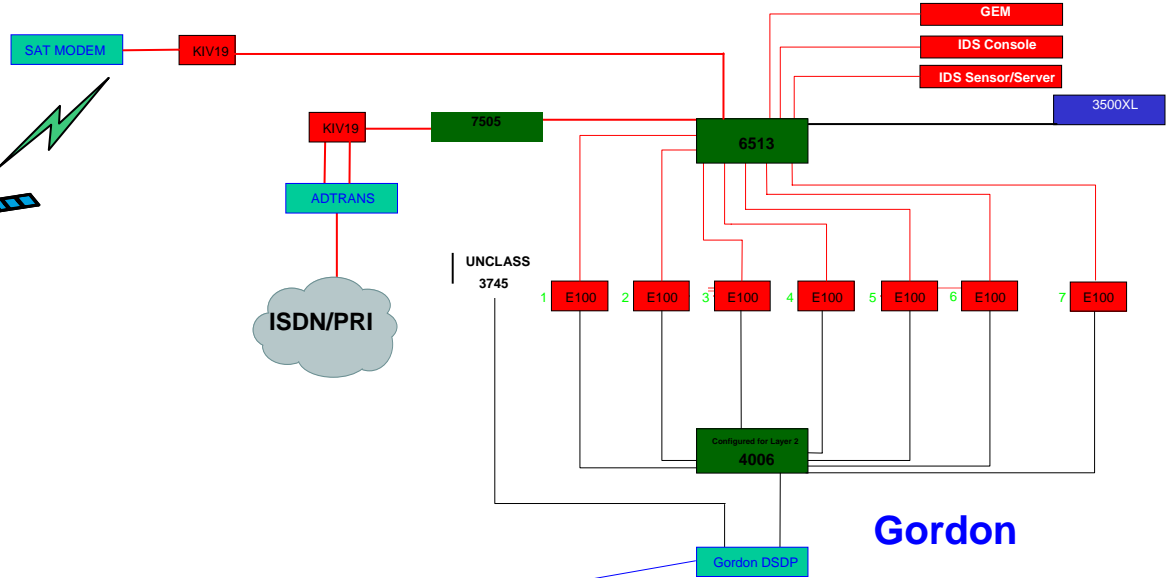


# US Army TRADOC Battle Lab Collaborative Simulation Environment (BLCSE/DREN) Network Battle Command Battle Lab - GORDON

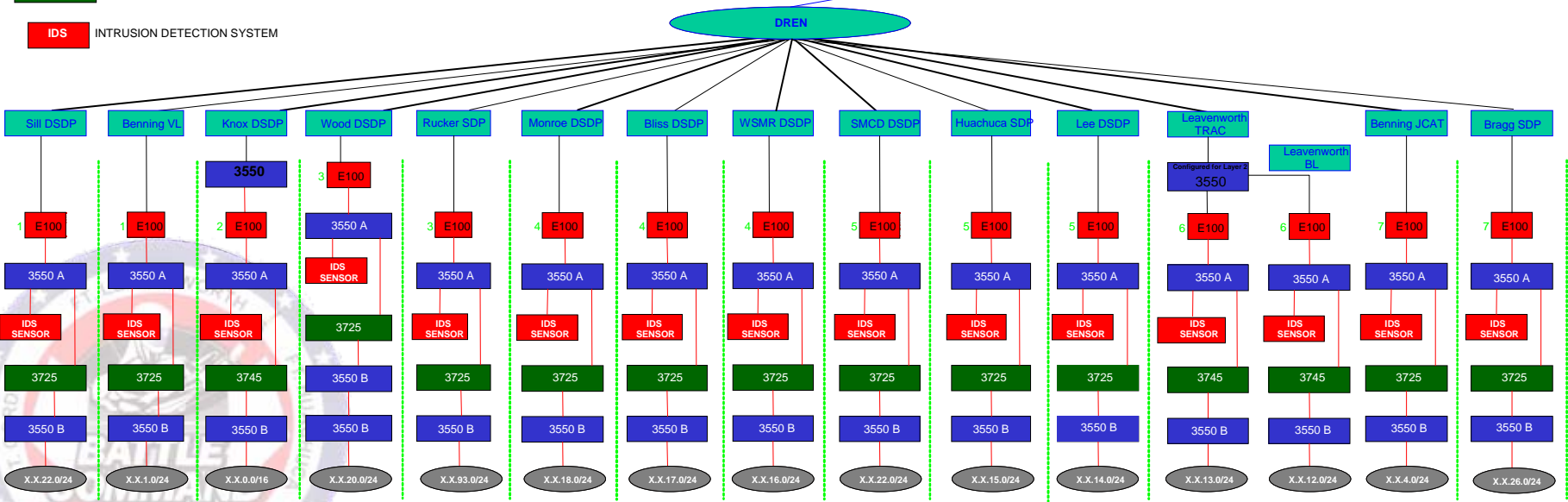
Gordon Deployable Assets



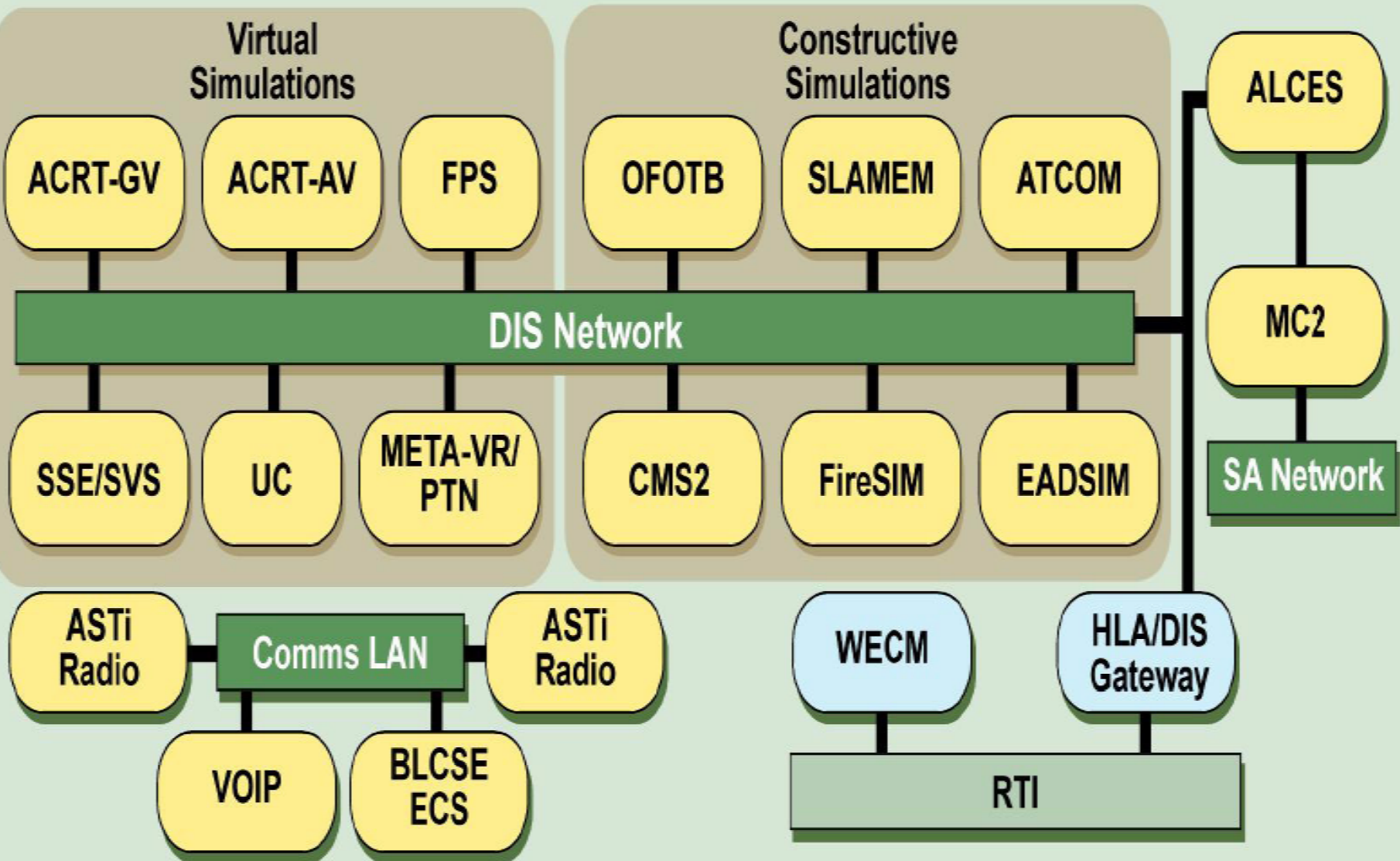
- E100 General Dynamics 100Mbps TACLANE
- 3550 A CISCO 12 Port Gigabit Ethernet Switch
- 3550 B CISCO 48 Port 10/100Base T Ethernet Switch
- 3725 CISCO 3700 Series Modular Router
- IDS INTRUSION DETECTION SYSTEM



Gordon



# Current BLCSE Simulation Federation



DIS Systems

HLA Systems

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