

CorpsLON Requirements and the MILCON Transformation Model RFP



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MILCON Transformation Model RFP Requirements

The following is a summary of the requirements in the MILCON Transformation Model RFP:

- Not all requirements are discussed here
- Project specific requirements are specified in the project RFP
- The information provided is for informational purposes only
- Where conflict exists, the contract RFP provides the definitive requirement



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MILCON Transformation Model RFP Overview

- Design-build RFP (“faster, cheaper, better”)
- Evolution of controls requirements:
 - Initially almost no requirement
 - Single paragraph on controls “Open LNS-Based LonWorks”
 - A few pages
 - More “CorpsLON” requirements
 - “If no UMCS provide one”
 - Now (as of Nov '07):
 - LonWorks and BACnet (by exception only)
 - Specifier options for UMCS and/or integration



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MILCON Transformation Model RFP Overview

- We **want** to get CorpsLON as specified in UFGS 23 09 23 and UFGS 25 10 10
- MILCON Model RFP cannot include all UFGS requirements
- RFP includes as much as possible, we trust industry to do “the right thing” for the rest



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BACnet or LonWorks

- RFP includes requirements for both
- Selection of which requirements to be used must be made in consultation with the installation/project site
- LonWorks systems are preferred, and unless there is a strong reason to select BACnet, LonWorks requirements should be used
- ***If the installation has an existing BACnet UMCS and wishes to continue with BACnet, use the BACnet requirements, otherwise use the LonWorks requirements***
- ERDC-CERL contacts provided for help



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Give Us an Open System

5.8.3 The building control network shall be a **single complete non-proprietary** Direct Digital Control (DDC) system for control of the heating, ventilating and air conditioning (HVAC) systems as specified herein. The building control network shall be an **Open implementation of LonWorks®** technology using **ANSI/EIA 709.1B as the only communications protocol** and use **only LonMark Standard Network Variable Types (SNVTs)**, as defined in the LonMark® Resource Files, for communication between DDC Hardware devices to allow multi-vendor interoperability.



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Really, Give Us An Open System

5.8.3.1 The building automation system shall be open in that it is designed and installed such that the Government or its agents are able to perform repair, replacement, upgrades, and expansions of the system without further dependence on the original Contractor. This includes, but is not limited to the following:

- Install hardware such that individual control equipment can be replaced by similar control equipment from other equipment manufacturers with no loss of system functionality.
- Necessary documentation (including rights to documentation and data), configuration information, configuration tools, programs, drivers, and other software shall be licensed to and otherwise remain with the Government such that...



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Controller Requirements

- Controllers must be ASCs whenever a suitable ASC exists
- Controller must be LonMark certified whenever a certified ASC exists for the application
- ASCs must have LNS plug-ins whenever an ASC with plug-in exists for the application
- All settings and parameters used by the application shall be configurable via SCPT, UCPT, SNVT *nci* or hardware settings on the controller itself
 - Yes, even for programmable controllers



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Controller Requirements

- Provide all input and output SNVTs required to support monitoring and control:
 - SNVT outputs for all hardware I/O
 - SNVT outputs for all setpoints
 - SNVT inputs for override of setpoints
 - All other SNVTs needed (“we trust you”)
- We don’t have Points Schedules in the RFP so we need to generalize



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Local Display Panels (LDPs)

- Current RFP does not require LDPs
- LDPs to be added at next revision:
 - Exact LDP requirements TBD
 - Likely will require an LDP at each air handler with multiple zones or over a certain size



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Submittals

- The latest version of all software and user manuals required to program, configure and operate the system
- Riser diagram
- Control System Schematic diagram and Sequence of Operation for each HVAC system
- Operation and Maintenance Instructions
- LonWorks® Network Services (LNS®) database for the completed system
- Quality Control (QC) checklist



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Submittals

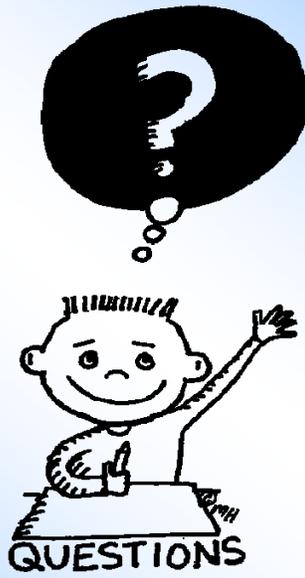
- Points Schedule drawing that shows every DDC Hardware device. The Points Schedule shall contain the following information as a minimum:
 - Device address and NodeID.
 - Input and Output SNVTs including SNVT Name, Type and Description.
 - Hardware I/O, including Type (AI, AO, BI, BO) and Description.
 - Alarm information including alarm limits and SNVT information.
 - Supervisory control information including SNVTs for trending and overrides.
 - Configuration parameters (for devices without LNS plug-ins).
- Example Points Schedules are available at <https://eko.usace.army.mil/fa/bas/>



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