

1.0 OVERVIEW OF ART

1.1 Introduction

Welcome to the Automated Requirements Translation (ART) software tool. This program is designed to be used by Air Force, Navy, and Army user and acquisition personnel throughout the acquisition process to translate User Needs, as stated in the Operational Requirements Document (ORD), into Diagnostic, Reliability and Maintainability (D,R&M) specification parameters that can be placed on contract.

1.1.1 The Mission Need Statement (MNS)¹

Department of Defense (DoD) Components use a Mission Need Statement (MNS) to document deficiencies in current capabilities and opportunities to provide new capabilities, expressed in broad operational terms. The MNS:

- Identifies and describes the mission deficiency
- Discusses the results of mission area analysis
- Describes why non-materiel changes (i.e., doctrine, tactics, etc.) are not adequate to correct the deficiency
- Identifies potential materiel alternatives
- Describes any key boundary conditions and operational environments that may impact the ability to satisfy the mission need, such as information warfare

System performance objectives and thresholds are developed from, and remain consistent with, the initial broad statements of operational capability. The requirements are refined at successive milestone decision points, as a consequence of cost-schedule-performance trade-offs during each phase of the acquisition process.

1.1.2 The Operational Requirements Document (ORD)

The ORD is a formatted statement containing operational performance parameters for a proposed concept or system. The ORD requirements represent specific, quantified user needs based on the general needs described in the MNS.

The ORD describes the overall mission area, the type of system proposed, and the anticipated operational and support concepts in sufficient detail for program and logistics support planning. It includes a brief summary of the mission need. If a documented mission need did not precede the Operational Requirements Document, then the latter must include an explanation of how alternatives for satisfying the mission need and developing operational requirements were investigated.

¹ See DoD Instruction 5000.2 for more information on the MNS and the ORD.

1.2 Tool Description

The ART software tool allows users to translate D,R&M parameters in two directions:

1. **USER NEED-TO-SYSTEM SPECIFICATION.** The ART tool calculates the "optimized" values of the appropriate D,R&M system specification parameters based on the selection of pre-defined User Needs (i.e., Break Rate, Fix Rate, etc.) and the desired values of these parameters as entered by the user.
2. **SYSTEM SPECIFICATION-TO-USER NEED.** The ART tool calculates the "optimized" values of the User Needs that correspond to the selection of D,R&M system specification parameters (i.e., MTBCF, MTTR, etc.) and the desired values of these parameters as entered by the user.

The ART tool accommodates three levels of system specification parameters. Level 1 specifications include elements not directly under the contractor's control. Level 2 specifications are solely based on those elements considered to be inherent to the contractor's hardware and software design. Diagnostic specifications focus on the diagnostic and testability design characteristics. Diagnostic specifications are difficult to verify in field operation or to measure using current military maintenance data systems.

The ART program screen consists of five areas:

- 1) A desktop area (with vertical scroll bars) in which requested data and reports are displayed
- 2) A Current Session Data area, where information pertaining to the current session (analyst's name and agency, system nomenclature, etc.) is displayed
- 3) A Message area, in which commentary on the status of the session is provided
- 4) An Instructions area, in which guidance for using ART is provided to the user
- 5) The Menu Bar, displayed as the top line across the main ART dialog box

1.3 Computer Requirements and Installation of ART

1.3.1 System Requirements

Installation of the ART software tool requires software and hardware with the following minimum characteristics:

- IBM PC or compatible 80836 or higher
- 4 MB of memory (8 MB or greater is recommended)
- Windows 3.1 or higher
- Mouse or other pointing device
- Access to a laser printer for reports
- 1 MB of hard disk space (required storage space grows as Session Database grows)
- CD-ROM drive (10X or better)

1.3.2 Installation

The ART software tool installation set consists of a single read-only compact disk (CD). Place the CD in the CD-ROM drive and run the setup file. This can be done from the Program Manager or from the taskbar. In either case, you must run the file as shown in the following example:

```
Select D (letter of your CD-ROM drive):\setup
Press "Enter" or, from the taskbar window, "OK"
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Then, follow the instructions that appear on your screen.

1.3.3 Possible Installation Problems

During installation, various .DLL files are placed in the \WINDOWS\SYSTEM directory. Some Windows installations place copies of .DLL files in the \WINDOWS directory. If your configuration has previously placed .DLL files in the \WINDOWS directory, some may conflict with those placed in the \WINDOWS\SYSTEM directory during the ART installation. The conflict arises because Windows searches for .DLL files first in the \WINDOWS directory, then in the \WINDOWS\SYSTEM directory. Since the .DLL files in the \WINDOWS directory are found first, you may receive error messages when you run ART stating that you have .DLL files that are old versions. The system will then not allow ART to be run.

If you get such error messages and ART does not run, you must take one of two actions. You can copy the affected .DLL files from the \WINDOWS\SYSTEM directory, or you can remove or rename the offending .DLL files in the \WINDOWS directory. Following is a list of the .DLL files installed with ART.

- MSAFT112.DLL
- VBDB300.DLL
- CTL3D.DLL
- GSWDLL.DLL
- MSAJT200.DLL
- PDBJET.DLL
- PDIRJET.DLL
- PDCTJET.DLL
- BWCC.DLL
- MSJETDSP.DLL
- PDBBND.DLL
- PED110.DLL
- SIMADMIN.DLL
- SIMBA.DLL
- WBTRCALL.DLL
- VBRUN300.DLL
- CRPE.DLL
- CRXLATE.DLL

1.3.4 SHARE or VSHARE.386

The underlying database system for the ART tool is Microsoft ACCESS V2.0. ART makes use of the Crystal Reports .VBX file, which accesses the database at the same time as does the main program. Consequently, the database must be shared, and either the DOS SHARE program or the VSHARE.386 program must be used.

During ART installation, the setup routine will check to see if DOS SHARE is being used. If it is, nothing is done. If it is not, then the VSHARE.386 program is copied to the

\WINDOWS\SYSTEM directory, and the "device=VSHARE.386" statement is added to the SYSTEM.INI file.

If DOS SHARE is being used, you must modify your AUTOEXEC.BAT file to include the following statement:

SHARE/L:500/F:500

This statement allows enough links and files to be opened simultaneously to accommodate ART.

1.4 Reporting Comments and Problems

If you have any comments on or problems with ART, please contact:

Mr. David Nicholls
Reliability Analysis Center
201 Mill Street
Rome, NY 13440-6916
(315) 339-7089, dnicholls@iitri.org