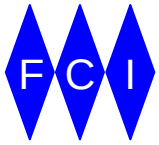
STAR Library Manager 1R3
Release Announcement

February 2012

Formula Consultants Inc.



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STAR Library Manager, LIBMGR, is a proprietary product of Formula Consultants Incorporated. Library Manager is licensed for use in computer centers using Unisys OS 2200 and it enables those systems to use the resources of a virtual tape library (VTL).

The System for Tape Administration and Reporting, STAR-1100, is a proprietary product of Formula Consultants Incorporated. STAR-1100 satisfies the magnetic tape library management requirements of, and is licensed for use on, computer centers using Unisys OS 2200.

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Software Version: 1R3

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General

Formula Consultants Incorporated is pleased to announce that Level 1R3 of STAR Library Manager is now available for distribution. STAR Library Manager is FCI's library control software for the Dynamic Solutions International (DSI) virtual and physical tape libraries within the Unisys OS 2200 environment.

The STAR Library Manager level 1R3 product release can be obtained via the FCI Support Center.

Product Overview

The STAR Library Manager (LIBMGR) is software that enables OS 2200 to use the tape automation services of the DSI Virtual Tape Library (VTL) and DSI Physical LTO Library (PTL).

The LIBMGR program executes in a batch background run. OS 2200 uses the CARTTAPELIB$ facility to pass tape mount and dismount requests to tape library solutions. In its interface with CARTTAPELIB$, LIBMGR translates these requests into command sequences which can be recognized as requesting external library resources. The requests are passed to the VTL and PTL via COMAPI using a communication network controlled by CPcomm or CPCommOS.

The CARTTAPELIB$ interface allows OS 2200 to communicate with up to four tape library handlers. Consequently, LIBMGR supports up to four installation instances to allow full utilization of CARTTAPELIB$. Each of these instances uses a different installation mode, from A through D. Each installation is independent and has its own background run.

Library Manager uses the COMAPI facility in OS 2200 to communicate with the VTL, the PTL and with the STAR Scratch Pool Selector Server. See Figure 1 below.

The Library Manager is released in absolute (zoom) form only, along with standard runstreams.

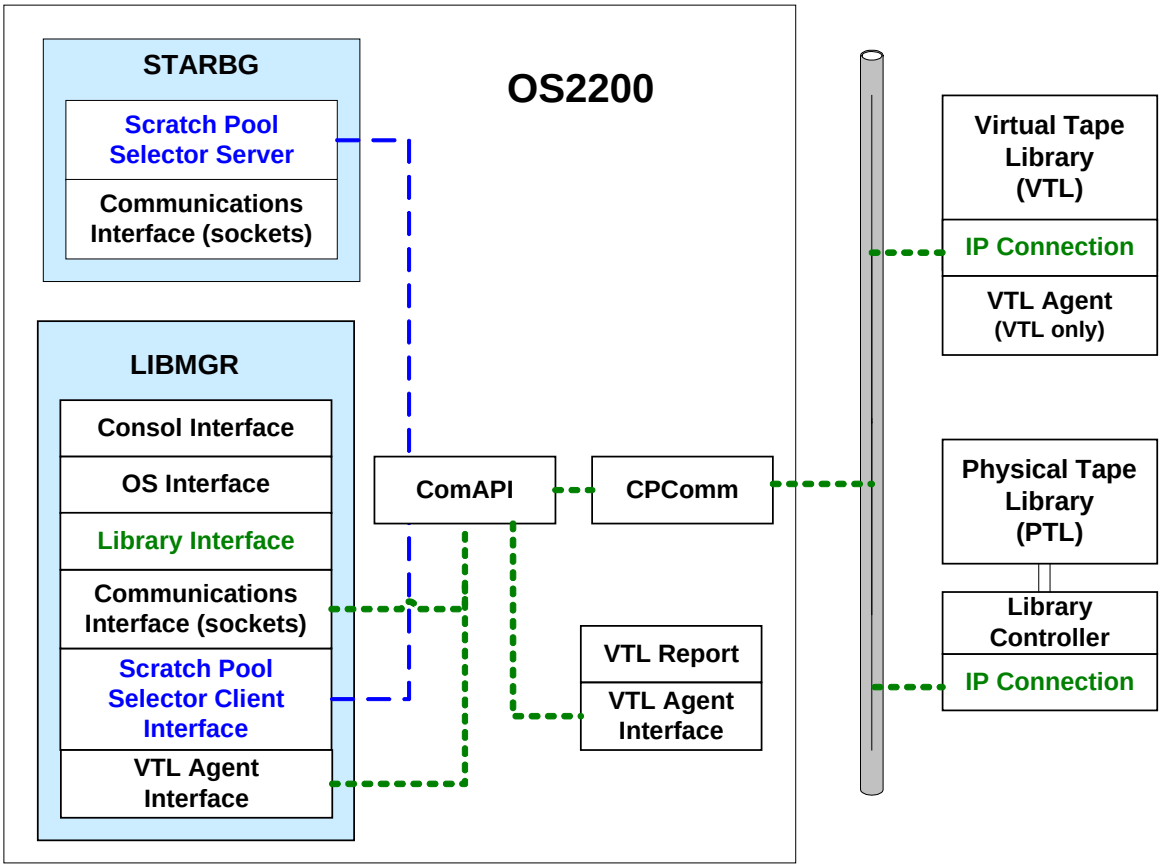

Figure 1. Overview of LIBMGR Components

Release Description

Feature and Enhancement Release

STAR Library Manager 1R3 is a feature and enhancement release. Key features and enhancements of the release are described in subsequent sections of this document.

New Features

Physical Tape Library Support

The STAR-1100 Library Manager can now be used to automate volume mount and dismount requests with a DSI physical tape library (PTL). The STAR-1100 Library Manager communicates using TCP/IP to the DSI Library Controller device which connects to the DSI Physical LTO Tape Library. A single install mode (copy) of Library Manager can communicate either to a VTL or to a Physical Tape Library.

On a single OS 2200 partition, you could potentially have up to four (4) instances of Library Manager running. Each instance could be managing either a VTL or a PTL. See the STAR Library Manager 1R3 Installation and Administrator Guide for more information about how to configure Library Manager to support your site's needs.

VTL Report Utility

The VTL Report utility generates a report of the volumes in the VTL. The report output has user-defined formatting options and can contain detailed volume information including: Library, Slot, Maximum Capacity, Total Size, Data Written, Capacity On Demand, Read Only, Compressed, Scratch, Owner, and Machine ID.

The utility obtains some of its information via the standard connection with the VTL using iSCSI and the SCSI media changer command set. Also, DSI offers customers a separately priced product on the VTL – the VTL Agent. The VTL Agent can provide additional volume information above and beyond what is supported in the standard iSCSI interface. Library Manager has an optional component, the VTL Agent Interface, which can query the VTL Agent to obtain this additional information and merge it into the VTL Report.

The VTL Report also has an interface to update the STAR-1100 Tape Inventory File (TIF) for some detailed volume stored in the VTL. When users specify this option in the VTL Report, information about current data written is passed to and updated into the TIF.

VTL Fail Over Notification

The DSI VTL Agent which can be installed on the VTL, has the capability to report on fail over events. Library Manager can receive these notifications through its optional VTL Agent Interface.

Enhancements

New Configuration Parameters

PLIB

The PLIB (or PLIBRARY) statement is used for defining a Physical Tape Library (PTL).

VTL_AGENT

The VTL_AGENT parameter is used to enable a connection to the optional DSI VTL Agent product that resides on the VTL. The VTL Agent parameter is used for the VTL Report Utility, enhanced DISPLAY commands and VTL Fail Over notification.

VAULT_SIZE

The VAULT_SIZE parameter defines the number of volumes that may reside in a Virtual Vault in a VTL. This parameter is used by the VTL Report utility when reporting on volumes that are in the library and additionally in the virtual vault.

MICS

The MICS parameter defines whether or not the VTL Report Utility will create a MICS Accounting file in the same format used by the Sightline Torch Product.

ROTATION_VALUE

Library control programs calling Unisys' external tape interface CARTTAPELIB$ are responsible for implementing a rotation scheme which will function in an equivalent manner to EXEC drive rotation. The ROTATION_VALUE parameter permits users to adjust the rotation algorithm to satisfy their local requirements.

SIZE_SCALE

The SIZE_SCALE parameter defines a size adjustment that is applied to the volume data written size.

UTIL_TARGET

The UTIL_TARGET parameter defines the iSCSI target name and iSCSI initiator name to be used by the VTL Report Utility.

VTLRPT_LIB_INIT_FAIL

The VTLRPT_LIB_INIT_FAIL parameter defines the action for the Volume Report should the connection fail. This parameter will determine if the VTL Report will terminate or wait.

New Operator Commands

EJECT

In a VTL environment, the EJECT console command will EJECT a virtual volume from the library and move it to the VTL's Virtual Vault. When issued to a physical tape library, the command will physically EJECT a volume from the PTL.

```
*LMA EJECT DS0330
  Volume DS0330 ejected
```

CYCLE

The console command will close and catalog new Library Manager trace files.

```
*LMA CYCLE
LMA*LIBMGR$A*TRACE-FILE(28). FILE CLOSED
LMA*LIBMGR$A*TRACE-FILE(29). FILE OPENED
```

LICENSE

The LICENSE command will report the Library Manager License Key information.

```
*LMA LICENSE
  License is valid through 01/31/2013
  Config line 4: Key = 27C50F1342423F2EF2D3A2E2E6F0D02B0 .
  Site info string is FCI480FCI-PART-E;DORADO_4080;H8Y8TH1;A
  Licensed for 99 libraries and 999999 slots
```

New Runstreams

STVTLRPT-A, STVTLRPT-B, STVTLRPT-C and STVTLRPT-D

The new STAR Library Manager VTL Report runstreams have been provided to support the ability to produce a VTL Report Utility. These runstreams will use the VTL Report utility to produce a volume report.

Enhanced Operator Commands

DISPLAY LIBRARY name DETAIL

The STAR Library Manager DISPLAY LIBRARY command has been enhance to provide additional information when the VTL_AGENT is configured.

```
*LMA DISPLAY LIBRARY VTL01 DETAIL
  LIB: VTL01  Address:10.100.0.71 - VTL4080 connected
    Pool: LMABADPOOL, LMAPOOL, LMASLPOOL, LMANLPOOL
    Pool: DISAPOOL
    VTL space available is 78493 of 2365094 MB
      V98000        Avail
      V98001        Avail
...
```

DISPLAY VOLUME volser DETAIL

The STAR Library Manager DISPLAY VOLUME command has been enhance to provide additional information when the VTL_AGENT is configured.

```
*LMA DISPLAY VOLUME DS0330 DETAIL
  Volume DS0330 is at home in library VTL01, media=9840
  DS0330 data=25 MB  curr=2048 MB  max=2048 MB  COD=N  RO=N
```

LEVEL

The STAR Library Manager LEVEL command has been enhance to provide additional information when the VTL_AGENT is configured.

```
*LMA LEVEL
 LibManager 1R3 (1-3-8) Mode:A 2012 Feb 17 Fri 1129:16
 VTL Agent 10.100.0.71 is for VTL DSI9250-43018-FCI
 VTL Agent 10.100.0.71 is Agent version 2.01.029
 VTL Agent 10.100.0.71 is VTL level v5.10 (Build 2030) (is203075-mp)
```

STAR Library Manager Notes Of Interest

None.

Restrictions and Limitations

UCS object module execution must be supported. This includes support for extended mode by the Exec as well as installation of the LINK and URTS products.

Compatibility & Migration

Release 1R3 is generated under CP OS2200 11.3. The STAR Library Manager requires STAR-1100 Level 8R1 or higher.

Previous Level Support

Prior levels of STAR Library Manager currently supported include 1R2.

FCI will support STAR Library Manager level 1R2 until March 2013.

Documentation

Documents provided with release 1R3 include:

- *STAR Library Manager 1R3 Release Announcement*

- *STAR Library Manager 1R3 Installation and Administrator Guide*, FP-161-1R3
- *STAR Library Manager 1R3 OS 2200 Release Tape Recreation Instructions*
- *STAR Library Manager 1R3 Quick Start Notes*

FCI Website

You may obtain general information about Formula Consultants, Inc. and its products at our website at www.formula.com. Once you register with the site and receive a userid and password, you can also download Notes of Interest. Product documentation in PDF format is also available (Adobe Acrobat™ Reader required).

FCI Support Center

FCI Support Center (FCISC) is available for use to support STAR Library Manager 1R3. The FCI Support Center is a 2200 host server software system accessible via the standard UNISYS Remote Site Support (RSS). It allows you to send and receive data electronically to and from FCI. Refer to the *STAR Library Manager Installation and Administrator Guide* for more information.

OS 2200 EXEC Considerations

Unisys maintains OS 2200 EXEC Problem List Entries (PLEs) for CARTTAPELIB$. As CARTTAPELIB$ is the crucial interface between STAR Library Manager, the OS 2200 EXEC and the VTL, you should review these PLEs to see if any are appropriate for your build.

PLE #	HEADLINE DESCRIPTION
18577046	Exerr-003 using CARTTAPELIB$ with 20+ devices
18582121	Excessive number of poll requests in CARTTAPELIB$ CSC usage
18582724	CTL monitor not detecting the timed out response from the CSC interface
18588765	Exerr-410 or Exerr-003 in CTLCMPLPOL

PLE #	HEADLINE DESCRIPTION
18732556	Exerr-417 in CTLSENDREQ on MOUNT request using CARTTAPELIB$
18623544	Exerr-003 or Exerr-410 using CARTTAPELIB$ for cartridge tape library

While these PLEs are the only known candidates for inclusion in a build, you can search EXEC PLEs for any additional relevant corrections by using the keywords VTL and CTL.

Corrections

File 12 on your release tape contains PCRs or Object Module updates, if any; which have been generated against this release, as of the date your tape was created. Include any of these corrections applicable to your site with the first build from this tape. STAR Library Manager elements are a combination of basic and UCS elements so the PCRs are organized by STAR Library Manager processor type (basic mode or UCS). These elements can be @ADDed following an @COMUS, to enter the corrections into your local COMUS database. First you should examine the file to determine which elements you need to add to your build.

The elements README, CHGNUM-ALL, and LIBMGR-NOIS are informational only and should not be @ADDed to your COMUS database.

The possible elements in File 13 are:

README	explanation and cutoff date/time
ADD/SGS	changes for the ‘additional SGS’ build prompt
BASE/*version*	changes to STAR LIBRARY MANAGER elements
CHGNUM-ALL	list of all change numbers
LIBMGR-NOIS	all relevant Notes of Interest

where:

version can be BASIC or UCS depending on the associated STAR Library Manager element.

The CHG numbers generated by COMUS must be entered at the ‘New Change number’ build prompt. Enter these numbers individually, or @ADD the CHGNUM elements that apply to your build.

If you add UCS corrections, the UCOB and/or UC compilers must be installed. Another method of including UCS corrections is to copy updated object modules contained in this file. This is done by answering the build prompt, ‘Any replacement Object Modules to be included’, and specifying the filename into which the modules were copied.

File 12 of your release tape also contains Notes of Interest in the element called LIBMGR-NOIS. Notes of Interest are field bulletins which we recommend reading prior to generating or installing STAR Library Manager.

Ordering Instructions

To order your site's copy of STAR Library Manager 1R3, contact a sales representative at Formula Consultants Inc., at **714-778-0123**

or complete the attached Product Order Form and fax it to 714-778-6364, or mail your order to:

Formula Consultants Incorporated
P.O. Box 544
Anaheim, CA 92815
Attn: Product Sales

or Order STAR Library Manager 1R3 electronically by addressing your e-mail to:

sales@formula.com

or Order STAR Library Manager 1R3 through the Formula Consultants website at:

www.formula.com

Product Order Form

PRODUCT: **STAR LIBRARY MANAGER Level 1R3**

CUSTOMER: _____

DELIVERY ADDRESS: _____

_____

CITY, STATE: _____

ZIP CODE: _____

CONTACT: _____

TELEPHONE NUMBER: _____

LAST STAR LIBRARY MANAGER LEVEL RECEIVED: _____

General Releases

The OS 2200 Software for STAR Library Manager is available electronically on CD in four different release "tape" formats, each in their own directory. The directory formats are:

DVD, DDP, FLIT and VTH.

Some sites will require a cartridge tape for a successful installation.

If **all** of the following are **true** for your site, please request the OS 2200 components of STAR Library Manager on cartridge tape.

- You are **not** running on a Dorado 300 series or above.
- You **do not** have DDP-FJT 5R5C (CP OS2200 9.0) or higher installed. It does not have to be running, it merely must be installed.
- You **do not** have FLIT 12R3 (CP OS2200 9.0) or higher installed.
- You **do not** have the Unisys VTH EXEC feature installed.
- You **do not** use or have RSS configured to run through the Internet, **and** your firewall **does not** allow you to send and receive on your port 102, with FCI's IP address.

Media for General Release

FCI offers the following options for receiving the general release of STAR Library Manager 1R3:

☐ CD

☐ Electronic via RSS and the FCI Support Center

Use SYSLIB*LIBMGR$A.NEW-RELEASE/RSS-SCRIPT *to copy to local tape*.

Media for Corrections

FCI offers the following options for receiving corrections to STAR Library Manager 1R3.

☐ CD

☐ Electronic via RSS and the FCI Support Center