

To: MAB Distribution
From: F. W. Martinson
Date: May 23, 1984
Subject: Third Party Software Submission Procedures

Purpose

To define policy and procedure for installation of third party software. Guidelines for acquiring Third Party Packages are not part of this MAB. This procedure assumes acquisition of software by Marketing and concurrence by MDC has already occurred. This MAB is also intended for release to vendors to provide definition of MDC requirements to which vendors must conform to prior to installation in standard system libraries.

Types of Third Party Software

There are two types of third party software. The first will be called "Integrated Software", and the second "Self-Contained Software".

Integrated Software is software developed under contract to MDC by non-MDC organizations (i.e. fortran, cobol) OR applications software that requires software changes to Multics to support the package (i.e. forum) OR which executes in any inner ring (i.e. forum). Packages in this category require a large degree of conformance to MDC programming and installation standards.

Self-Contained Software is software that requires no special software support outside the package itself and which executes none of its own software from an inner ring. Packages in this category require little or no conformance to MDC programming and installation standards. The primary requirement for installation of a package in this category will be agreement between MDC and Multics Marketing that this package should be installed.

***** Integrated Software - Examples are Fortran and Forum *****

1. Must be installed in >system_library_unbundled and it's equivalent source and object directories within the >library_dir_dir hierarchy. Include files are installed in >library_dir_dir>include. Info segments are installed in

Multics Project internal working documentation. Not to be reproduced or distributed outside the Multics Project.

>documentation>info_segments or >documentation>subsystem as appropriate.

2. Must conform to Multics coding standards. Currently the Coding Standards Documentation is under revision. When revision is complete this MAB will be updated to refer specifically to that document.

3. Must undergo MCR Board scrutiny. This software can only be installed by an approved MCR or by specific management direction.

4. Must conform to Documentation Standards in the form of a standard Honeywell Manual. Usually there will be no special instructions to install this software. Special instructions, if required, should appear in the Users' Guide for the package. See Appendix A of the Forum Users' Guide (CY74) for an example. Alternatively special instructions can appear in the Installation Instructions SRB for a General Release. Instruction SRBs will not be produced for Integrated Software.

5. Must conform to Packaging Standards. Software must be installed in accordance with existing installation standards. Basically this means MDC must receive all source and appropriate installation forms (MSCRS) properly filled out. Source is compiled by MDC. Object archives are built by MDC, which then are bound to produce executable software. Source archives, object archives and executable software is then installed. Current packaging standards are:

A. The package must be contained in one or more bound segments. The names must generically identify the product. Each bound segment will include an equivalent source and object archive(s). An exception may be made in the case of source modules, where source modules are specifically excluded. Free standing segments should be avoided but will be permitted on an exception basis, upon mutual agreement by both parties. Mutual agreement normally will be in the form of an approved Multics Change Request (MCR). Packaging examples of names for a hypothetical "frobis" product are:

```
bound_frobis_ (Executable bound segment)
bound_frobis_.archive (Object archive)
bound_frobis_.s.archive (Source archive)
```

B. Command and subroutine names, added to the primary product name, must be preceded by the generic name that uniquely identifies the product, followed by an underscore, followed by the functional command name. By convention, all subroutine names are followed by a trailing underscore. Examples of command and subroutine names are:

```
frobis_print
frobis_list
frobis_delete_
```

C. Segments within each archive will have as a part of the beginning of each name, the generic name of the product. Examples of segment names are:

```
frobis_print.pl1
frobis_list.pl1
frobis_delete_.pl1
```

D. Include files unique to each product will have as a part of the beginning of each name, the generic name of the product. Examples of include file names are:

```
frobis_data_seg.incl.pl1
frobis_ptr_dcls.incl.pl1
frobis_error_names.incl.pl1
```

6. Software Support (problem reporting) will be performed via the TR System. The TR System will be used to route trouble reports to the proper developer. The developer will be the vendor of the package, unless a separate contractual agreement has been executed. TR investigation, response and resolution will be performed within guidelines outlined in MAB-044.

7. Software is distributed solely by the CSD Software Distribution Library and only when a request for distribution appears on the CSD Ship Schedule. Procedures exist for exceptions to this rule in the case of corrections to fix critical software problems, and release of software to Beta Test Sites or Controlled Release Sites. The latter two examples require separate agreements to be signed between the customer and Honeywell. Third party agreements should include verbiage which permits these alternate methods of distribution.

8. Must conform to Honeywell IS-14 and Software Technical Identifier (STI) standards. All third party software must contain protection notices and STIs as specified in MAB-052. The MDC Software Integration Project has responsibility for ensuring proper placement of protection notices and STIs in software. Therefore, there is little a third party vendor need to know about them other than that they must exist. It is up to the third party vendor to supply the text for the desired protection notice. The protection notice must be in Multics standard format to permit verification and checking by existing tools. The name to be entered on the protection notice identifies ownership of the product. Three examples of standard format protection notices are:

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9. Qualification of third party software is the responsibility of the vendor (owner) of the software unless, by mutual agreement, qualification is performed by MDC. It is the responsibility of the vendor to ensure the software package continues to run from release to release and is, as much as possible, release independent.

***** Self-Contained Software - Examples are SCFF and ISTAT *****

1. Must be installed in the >system_library_3rd_party (short name sl3p) library hierarchy. No software will be installed nor will links be permitted at the >sl3p level. Each third party package will be wholly contained in directories below sl3p. For example, in the case of a "frobis" product the structure would be:

```
>sl3p>frobis>executable (e)
      include (incl)
      info_segments (info)
      object (o)
      source (s)
```

Empty directories (e.g. no source to be shipped) will be deleted. With the entire package wholly contained and isolated in its own structure, problems with naming conflicts are minimized. These directories will not be in the default standard system search rules. To use any of these packages the user must execute a command such as:

```
initiate ([segs >sl3p>frobis>e>* -absp]) -a -fc
```

to ensure the correct software is initiated and name conflicts, if they exist, are properly resolved. Such a command could be part of a user start_up.ec.

2. May not conform to Multics coding standards. Conformance to standards is recommended but not required. If at all possible a coding standards manual should be made available to third party software vendors.

3. Software will not undergo MCR Board scrutiny or review. Installation authorization requires only a signed contract AND approval of Director, Multics Development Center and Director, Multics Program Office or their designees. To ensure proper recording and execution of each installation request, the vendor

of third party software will be required to fill out and submit standard software installation forms (Multics Software Change Request).

4. May not conform to Documentation Standards. Special instructions for the setup or use of a package is the responsibility of the vendor. Special installation instructions, must appear either as an online info segment installed in the info directory of the package itself, or as an appendix in the Users' Guide for the package. See Appendix A of the Forum Users' Guide (CY74) for a documentation example. Special installation instructions may not appear in the Installation Instructions SRB for a General Release. Installation Instruction SRBs will not be produced for Self-Contained Software.

5. Should conform to Packaging Standards as outlined in item 5 for Original Development Software. Conformance to these standards guarantees uniqueness of module names and therefore avoids problems with conflict of reference names. Conformance, to the packaging standard, is not required but is recommended for purposes of efficiency, ease of use, ease of installation and ease of maintenance. Software running in inner rings or gates will not be acceptable under any circumstances for Self-Contained Software products. Software submitted for installation in the >sl3p hierarchy will be installed as is, with the exception of adding protection notices or STIs. Source will not be recompiled. All software submitted for installation will be considered part of the third party package. Therefore, vendors not desiring to ship source to customers should submit for installation only source that they wish to be distributed.

6. Software Support (problem reporting) will be performed via the TR System. The TR System will be used to route trouble reports to the proper developer. The developer will be the vendor of the package, unless a separate contractual agreement has been executed. TR investigation, response and resolution will be performed within guidelines outlined in MAB-044.

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9. Qualification of third party software is the responsibility of the vendor (owner) of the software. It is the responsibility of the vendor to ensure the software package continues to run from release to release and is, as much as possible, release independent. Limited resources will be provided, on System M, to provide a vehicle for software qualification by the vendor.