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TO: MULTICS ADMINISTRATIVE DISTRIBUTION

FROM: D. R. VINOGRAD

SUBJECT: MULTICS LISTING TAPES

With the advent of external site operation of Multics, the
updating of listings so as to maintain an up-to-date library copy
of the system listings for the hardcore will become a very complex
task.   Either we must incrementally obtain and file reduced size
Xerox copies as new systems are released or we must bulk copy the
master listing for each new system.   Up to the present time, the
former approach has been used.   This has required the services of
two individuals and the reader has never been sure if he had the
most up-to-date copy.

Experience in the industry has dictated a different approach, that
of a series of tapes containing the listings of all the programs
that represent a given system.   The contents of these tapes can
be printed when listings are needed.   In an attempt to create such
a tape file the following approach will be used.   All future sub-
missions for the hardcore will be re-compiled by the Assurance Staff.
In order to make this task a minimum drain on the system resources,
a fourth queue for the translator daemon will be created.   This
queue will be available to only the Assurance Staff.   The set of
listings which represent the changes to a system will be dumped and
deleted when that system is installed.   Periodically a routine will
be run to meld the incremental system listing tapes into a master
copy.   In that every procedure in the hardcore is re-compiled once
every six months or so, within six months of the start of this
program a complete master tape should be available.   There are also

Other advantages to this procedure:

a.   The most up-to-date version of the compiler will be used to produce system code.   This provides further guarantees of both the source segment and the compiler's validity and means that the system will always be as up-to-date as possible.

b.   System Programmers will not have to request two listings for submission purposes, thus lowering the demand on the I/O daemon.

c.   As soon as the listing tape can be printed Xeroxing can be halted and multiple prints made using the listing tape. The second printer can be used for this purpose.