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EXPERIENCE DERIVED FROM TRANSFER OF JPL'S
VICAR IMAGE PROCESSING SYSTEM TO OTHER
ORGANIZATIONS*

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JPL's Image Processing Laboratory has
developed the IBM 360 based VICAR image
processing over a ten-year period. The
major components of the VICAR system
include (a) a syntax processor that translates simple image processing commands and
procedures into IBM 360 job control lan-
guage for actual task execution, (b) a set
of system level subroutines that optimize
disk and tape input/output functions for
image processing applications, (c) a set
of FORTRAN-callable subroutines that
provide image manipulation capability to
an application programmer, and (d) over
200 general purpose applications programs
that can be utilized as modules in construc-
ting processing sequences for one or
more images.

Recent additions to JPL's capabilities
have included (a) the Image Based Informa-
tion System (IBIS), a set of programs
and subroutines that make it possible to
merge graphics and tabular data with imag-
ing data (e.g. Landsat imagery) and gener-
ate statistics and reports from merged
data bases and (b) MINI-VICAR/mini-IBIS,
which provides a PDP 11 based basic image
processing capability and the capabilities
of IBIS to the minicomputer user,
written to minimize the impact of transfer
to other operating systems and other
computer manufacturers.

JPL began transferring the VICAR
system to NASA's COSMIC program distribu-
tion center in 1971, and several updated
versions have been transmitted since that
time, including the MINI-VICAR/mini-IBIS
system that was sent to COSMIC in April
1979. In most cases, the capabilities

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