

Technology Transfer Opportunities: New Development USGS Mini Image Processing System

About the System

The U.S. Geological Survey's Mini Image Processing System (USGS MIPS) is a public domain, full-featured software package with the ability to process and analyze remotely-sensed data. This includes: Landsat TM, Landsat MSS, Spot, AVHRR, radar, and sonar images. Other data, such as digitized aerial photographs, digital elevation models, and magnetics, gravity, and resistivity data can also be processed.

MIPS Processing Categories

The following are the major processing categories available in USGS MIPS:

- analysis and enhancements
- spatial filtering
- import and export utilities
- radiometric corrections
- statistical utilities
- vector processing
- classification/clustering
- geometric corrections
- interactive display and analysis
- sonar processing
- general utilities

MIPS Image Processing Programs

The current version of USGS MIPS consists of 100+ individual programs. Some examples of image processing programs include:

- multispectral ratios
- hue-intensity-saturation transforms
- low/high pass filtering
- cubic convolution resampling
- spatial variability analysis

- vector-to-raster conversion
- principal component analysis
- unsupervised classification
- haze/sun angle radiometric corrections
- nearest neighbor resampling
- multivariate statistics

Platforms

USGS MIPS was designed as an office research and development image processing system. Its original inception was in 1980 on a PDP 11/23. In 1986, USGS MIPS was ported to the VAX/VMS environment. In mid-1992, the porting of USGS MIPS to computer platforms supporting X windows and Motif began. As of February 1996, USGS MIPS is supported on the following hardware platforms. Note that all platforms require an ANSI C and Fortran compiler.

- DEC Alpha running Digital Unix
- DEC Alpha running OpenVMS
- Data General running Dgux
- Sun running Solaris

For More Information

For more information about USGS MIPS or to download the latest distribution, see the MIPS website at

<http://wwwflag.wr.usgs.gov/trs/software/mips>

The site includes complete installation instructions given under on-line documentation.

Questions, comments, or additional information can be addressed by sending email to usgsmips@goblin.wr.usgs.gov

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