22 December 1992

Release of TNT-MIPS V4.10

Introduction

TNT-MIPS V4.10 is being shipped to you on either 3.5" or 5.25" high density disks according to the preference expressed on your registration forms. The floppy disks which make up **TNT-MIPS V4.10** contain a common set of routines which are distributed to all current subscribers to **MIPS V3.32**. Installation of **TNT-MIPS** will not alter your current **MIPS V3.32** in any way. It will create a complete new **TNT-MIPS** structure on your drive and subsequently recreate or update it with future releases.

This release of **V4.10** is about a 95% equivalent of **V3.32** and the remaining missing processes are listed below. Since the cutoff date several weeks ago for the production of these **V4.10** disks, most of these missing processes have been converted and are now being perfected for use at the Fifth Annual User Workshop (**AUW5**). Should you wish an advanced special shipment of any specific missing process please contact Technical Support.

TNT-MIPS V4.11 will be shipped to you about 1 February 1992 as soon after the Annual Users Workshop as it can be produced and will complete the initial conversion of **MIPS** to **TNT-MIPS**. At approximately that time MicroImages will resume its normal quarterly upgrade schedule with the release of **TNT-MIPS V4.20** in March. The period between February and March will be occupied by a second pass through **TNT-MIPS** to speed processes up, reduce hard drive space requirements, and catch features which were omitted from the initial reprogramming of **MIPS** into **TNT-MIPS**. In March or April, MicroImages anticipates returning to business as usual with most of our software engineering time devoted to new enhancements of existing processes and entirely new processes. At that time we also anticipate instituting a more rigorous quality control program for **TNT-MIPS** as its code stabilizes.

MicroImages is now selling and shipping **TNT-MIPS V4.10** for workstations, PC, and Macintosh platforms. Advertising and other promotional activity for **TNT-MIPS** will begin in January. **MIPS V3.32** will continue to be included in all shipments for the 386 and 486 based platforms until **V4.11** is available. At that time, it will be at the purchaser's option which version is delivered for a 386 or 486 platform. However, both **MIPS** and **TNT-MIPS** will continue to be available at no additional charge upon special request for use with each hardware protection key for 386 and 486 based platforms.

Installation

Running **INSTALL** upgrades your key to authorize it for **V4.10**. It then decompresses and writes a copy of each licensed process from the disks containing **V4.10** into the selected directory on your hard drive. You must use the **INSTALL** routine on the installation disk supplied with this release to decompress the files during installation. Installing this **V4.10** will completely replace the earlier **V4.02** if the same hard drive is selected.

The **TNT-MIPS INSTALL** program works just as it does with **MIPS V3.32** but will not alter **V3.30**, **V3.31**, **V3.32,** or previous **MIPS** version in any way. As usual, it will check

your hard drive to determine that space is available for the installation you are making. Remember, **MS W V3.1** uses **DOS V5.0** and its addition to your system at this time will in no way will impair your continued use of **MIPS V3.32** or other **DOS** based software. Thus, assuming you have sufficient hard drive space available you can have both **TNT-MIPS V4.10** and **MIPS V3.32** installed for use.

It is our suggestion that anyone installing **TNT-MIPS** for the first time choose menu selection "**T**" (Install Minimal Test Version) offered by the **INSTALL** program. This approach will use about 5 megabytes of drive space. It will install only the **TNT-MIPS** display program and its associated support elements including the appropriate menu and the process to convert **RVF** project files into **RVC** project files. This comprehensive new display process is explained in detail in the printed reference material supplied earlier and in the on-line documentation and is the heart of **TNT-MIPS**.

When you experiment with the **TNT-MIPS** display process for the first time you will find that it is a much more comprehensive activity than in **MIPS V3.32**. It should be apparent that since the severe memory constraints of **MIPS** are being lifted by **MS W V3.1**, all our new processes will be considerably larger. Correspondingly, however, there will be fewer loading processes involved as many formerly independent processes are consolidated into fewer, more comprehensive procedures.

After you have familiarized yourself with the display process, choose menu selection "**M**" (Install **TNT-MIPS** Version 4.10) on the **INSTALL** program to complete the loading of all the other available processes. **TNT-MIPS V4.10** will require somewhat less than 42 megabytes of your hard drive. Eventually this hard drive requirement will shrink somewhat as processes are further streamlined and integrated together.

The 5.25" version has 24 disks as follows: 18 containing processes; 2 supplemental with additional processes; 3 containing both the **TNT-MIPS** and **MIPS** documentation; and 1 with the installation and **MI** wrappers.

The 3.5" version has 21 disks as follows: 15 containing processes; 2 supplemental with additional processes; 3 containing both the **TNT-MIPS** and **MIPS** documentation; and 1 with the installation and **MI** wrappers.

The 2 special supplemental disks contain additional processes and corrections added at the last moment and will simply be requested in the appropriate order when the main processes are being installed.

Unix platform key to support operation with MS Windows

Up to this point MicroImages has indicated that the lower cost Microsoft Windows version of **TNT-MIPS** (uses the black protection keys identical to those used for **MIPS**) could not be supported and used with the red protection keys. This red key is supplied with **TNT-MIPS** for Unix based systems (workstations, Macs, and PCs) for attachment to the serial port. MicroImages has now determined that it will be possible to modify **TNT-MIPS** so that it will operate when the red key used with the Unix platforms is attached to a serial port of a PC running **MS W 3.1**. It can also be categorically stated that due to limitations in the design of the less expensive black keys which will continue to be used with **MS W 3.1**, that they will never be able to be reprogrammed for use with any other platform.

MicroImages hopes to distribute all software versions of **TNT-MIPS** for all platforms on a single CD-ROM which would be distributed to all clients. The product level you have purchased would then determine which platforms you could install on with the product level you have purchased. For example, if you have purchased the U100 single user single processor Unix license then that red key would allow installation from the standard CD-ROM and operation on any platform currently supported by **TNT-MIPS** and to which the red key is attached. As another example, if you purchased a U45/M license for the Mac then that red key would also allow installation and operation at the D45 or 1024 by 1024 pixel resolution or less on a PC using **MS W 3.1**. However, until that goal is achieved, each **TNT-MIPS** user will have to pay an additional fee to obtain a distribution copy for the additional platform(s) involved on a quarterly basis. This additional fee will be set as low as possible to cover the cost of production which include preparation of the 2nd set of media, the media cost, and mailing costs.

The purpose of allowing the use of the Unix version on **TNT-MIPS** on any platform supported is so that those clients owning a workstation version of **TNT-MIPS** can temporally move it back and forth to a PC or a Mac. Possible reasons for this might be: 1) to use an existing scanner, printer, film recorder, or other peripheral which can not be moved forward to the workstation due to interface limitations; 2) to purchase and use the lower cost peripherals available on PCs or Macs; 3) move a slow, tedious process such as X-Y digitizing off an expensive workstation where it can be more economically conducted; 4) and other down scaled supportive operations which will free up the workstation for other uses.

Another possible use of this multiplatform workstation key will be to support your demonstrations of how your organization's central, operationally oriented remote sensing and GIS program can support the final use of their products at the field or local office, transaction counter, and so on. Thus you may use your networked workstations to prepare materials and then "borrow" the key for demonstrations of how the processes can be extended at field or local offices using a windows equipped PC or Mac. **TNT-MIPS**' Project File transparency across platforms and identical user interface on all platforms will make these logical steps possible when combined with this new red key option.

On-Line Documentation

Approximately 350 equivalent printed pages of **TNT-MIPS** documentation are included with **V4.10** containing the new on-line illustration display feature in a preliminary form. The on-line documentation printing capability of **MIPS** is now available within **TNT-MIPS** including printing out the documentation text (not illustrations as yet) on your laser printer.

A copy of the completed portion of the documentation has also been deposited at Kinkos in Lincoln as in the past. Please be very careful to specify the exact version number of a printed copy of the documentation when ordering from Kinkos as they now have both **V3.32** and **V4.10** on hand.

As a longer range solution it will be important that the illustrations be accessed directly from the CD-ROM disk used to distribute each new **TNT-MIPS** upgrade. In the interim period you will find that during the installation of the on-line documentation you will have the option of omitting the illustrations

The documentation available for **V4.10** primarily covers the operation of **TNT-MIPS** as a system and the main display process as well as some selected processes. As the conversion of **MIPS** to **TNT-MIPS** approaches completion all the processes will be checked and documented as rapidly as possible. However, the functionality of many application processes in **TNT-MIPS** are similar to those of the equivalent **MIPS** processes. Thus, the complete on-line documentation for **MIPS V3.31** has value to you until the **TNT-MIPS** documentation is complete. **V4.10** will also let you optionally load and use all the documentation available with **MIPS V3.32** for possible reference.

MIPSview™ Availability

MIPSview is the new name which will be assigned to the HyperIndex® stand alone product. The HyperIndex concept is now working within the display program in **TNT-MIPS V4.10**. Therefore, MicroImages is in a position to deliver within 30 days this new, renamed, stand alone replacement for HyperIndex. **MIPSview** retains the HyperIndex subsection devoted to using HyperIndex stacks. However, **MIPSview** is a separate, but identical stand alone version of the **TNT-MIPS** display process and has exactly the same features.

Due to the past confusion between our HyperIndex Linker option and the stand alone HyperIndex product we have named this revised product as **MIPSview**. This new name not only avoids confusion with the HyperIndex Linker option which is still available within **TNT-MIPS**, but conveys a clearer idea of the functionality of this expanded stand alone product. It is anticipated that **MIPSview** will evolve in the same general direction as Mapinfo, Arcview, and other run time or transactional oriented GIS products as appropriate new features are added to the **TNT-MIPS** display process.

MIPSview with a protection key is available at the same $1000 domestic price as was HyperIndex with discounts for quantity purchases. All current users of the stand alone HyperIndex product will be provided an upgrade to the initial version of **MIPSview** without cost when they indicate that they have switched their authoring station to **TNT-MIPS**.

Application Note Outlines

Internationalization and Localization (**I&L**). These has been considerable additions to the draft of this Application Note since its previous version and a new copy is enclosed.

Optimizing the Installation of Microsoft Windows

You will find bundled with this **TNT-MIPS** release a copy of WinSleuth™ GOLD produced by Dariana, Inc. in Cypress, California. Please read and observe the terms of Dariana's license agreement when using this product. MicroImages has purchased and provided WinSleuth to assist you in setting up your Microsoft Windows V3.1 for use with **TNT-MIPS**. MicroImages will also provide technical support for the use of this version of WinSleuth. This product will also be supplied for this same purpose with each new **TNT-MIPS**. Upgrades to this product will not be provided to you by MicroImages. Therefore, it is very important that you register your copy of WinSleuth directly with Dariana using the postcard registration form provided so that you receive notifications of available upgrades.

Why do you need WinSleuth GOLD? The fact that you have a working version of Microsoft Windows V3.1 (**MS W 3.1**) on your computer does not mean that it is properly

optimized for fastest operation. Optimal operation versus simply getting it to work can vary as much as 10 to 1 in execution time if not more. Word processors, spreadsheets, and other commercial products designed for use with **MS W 3.1** are small, simple processes deliberately designed to operate within minimal memory environments. They also are designed to tolerate inefficient setups such as temporary rather than permanent virtual memory (swap space); minimum amounts of real memory; unnecessary large and useless disk caches which are not used by **MS W 3.1**; the existence of RAMdrives which withhold memory; and so on. While these smaller applications will appear to work efficiently when run alone, they will also bog down in performance when multitasked without optimal **MS W 3.1** setup. **TNT-MIPS** for the PC is a very large microcomputer process designed to utilize all your system's resources which requires that **MS W 3.1** and **DOS** be set up properly to make them available.

The purpose of the WinSleuth utility is to provide you a method to check your **MS W 3.1** setup and review it with the MicroImages' Technical Support staff. Please refer your questions on how to get **MS W 3.1** operating to the software vendor who provided it to you. However, once you have **MS W 3.1** operating and WinSleuth installed please work directly with the MicroImages Technical Support to check and alter your environmental parameters for most efficient operation with **TNT-MIPS** and all your other products in a multitasking environment. Subsequently, MicroImages will be providing additional written information on what to watch for when setting up **MS W 3.1** for best operation using WinSleuth and other information and tips.

TNT-MIPS permits the selection and use of any display board and monitor combination available to you via your equipment supplier. Formerly with **MIPS** you selected, usually with MicroImages assistance, off the charts of display boards supported directly by MicroImages drivers. Now you should be forewarned that the selection and use of slow, old fashioned, (albeit) extremely cheap boards with **MS W 3.1** drivers will offer slow **MS W 3.1** and **TNT-MIPS** performance. To assist you in this area, MicroImages will be compiling and providing information on the new, economical, but greatly accelerated display boards which are now available to significantly speed up **MS W 3.1** user interface and thereby the **TNT-MIPS** interface.

Exclusive International Representatives

MIPS is currently in operation in 38 nations. Our Technical Support Staff is now in frequent contact via phone and FAX with our clients around the world. Continued expansion of interest in **TNT-MIPS** outside the United States has resulted in the addition of one new Exclusive International Representative during the last 6 weeks.

W. Australia State of Western Australia will now be serviced for MicroImages products by Spectrascan Pty. Ltd.; P.O. Box 130; West Perth; Western Australia; voice (619)387-8188 and FAX (619)387-8400. W. (Bill) Hollman is the principal to contact at Spectrascan which also provides a variety of natural resource, geological, and agricultural informational products and services. Other related software products marketed by Spectrascan include MicroStation, I/RAS, and other Intergraph products; MicroGIS; Oracle; and others. Datasets from the Australian Centre for Remote Sensing and the Australian Land Information Group are also distributed. Equipment available for integration and resale include Sun and HP workstations, PCs, and related input and output peripherals.

*Advanced User Workshop 5 (**AUW5**)*

The Fifth Advanced User Workshop (**AUW5**) will be held in Lincoln as usual on the bitter cold days of 12, 13, and 14 January 1993. At your request, this year January 15 (a Friday) will be scheduled as an additional "open day" for the workshop so you can all visit with your favorite programmer and technical support specialist. This year the fee for the 3 day formal workshop will increase to $400 and the open day will be provided without charge. **AUW5** will be focused entirely upon a review of the features in **TNT-MIPS** and your requests for new features and processes for it for next year.

One topic area for **AUW5** already suggested by you will be the demonstration and comparison of performance features of **TNT-MIPS** across a variety of platforms. MicroImages will attempt to prepare and distribute performance information addressing this question on some sort of normalized basis such as performance per dollar spent. The "open" Friday session will provide an opportunity for a personal, close up, comparative examination of these platforms and their performance.

Please also plan to bring along any of your sample project materials for review with your colleagues and MicroImages at **AUW5**. These might consist of posters, prints, plots, maps, reports, as well as disks (optical and floppy) containing project results and HyperIndex stacks. We will have adequate display areas and machines available for use with your demonstration materials and everyone else would be interested in seeing the unique things you are doing.

New Image Printers/Plotters Supported

The Tektronix II SD dye sublimation printer has now been supported for both **TNT-MIPS** and **MIPS** using its parallel interface. This 300 dpi dye sublimation printer handles letter, legal, and related metric sized papers and produces photographic like prints. It currently retails for $10,000 with a standard memory of 12 megabytes and a starter kit of supplies. No other options or memory are required for use with **MIPS** or **TNT-MIPS**.

Unfortunately, MicroImages is finding that many Postscript based printers, such as the Tektronix II SD must be borrowed from their manufacturer, setup, supported, and tested just like non-Postscript based printers. For example, printers which interface via a parallel ports have no way of telling **TNT-MIPS** what sizes of paper are installed and therefore what size of image area to support. Furthermore, the many printable areas supported by a given printer are often incorrect from the manufacturers materials or have round-off errors when converted from metric to or from the English system by a row or column which does not seem to make much difference to other software but is critical to **TNT-MIPS** since oversize multiple page printing is supported and gaining or losing a line of printels is fatal. MicroImages has no particular difficulty in supporting these devices but not all manufactures are cooperative in supplying loaner equipment for such purposes.

New Film Recorder Supported

The Polaroid Digital Palette CI-5000 film recorder has been supported for use with **TNT-MIPS**. It comes with its own interface card to the PCs ISA bus and with both instant film and 35 mm film backs as standard. The maximum resolution of the device is 4096 by 3600 pixels by 8 bits each for red, green, and blue. The Digital Palette retails for

approximately $6000 and was the recommended product a recent PC Magazine review or low cost digital film recorders.

Staff Changes and Expansions

Judy L. Wright has joined MicroImages as our 5th Documentation Specialist. Judy has a B.S. Degree in Nursing from the University of Nebraska. She joins MicroImages after operating Desktop Creations, a small desktop publishing business. Previously Judy was employed in similar positions including copy editor at the Lincoln Journal-Star. Her first assignment will be as part of the team rewriting the illustrated, on-line documentation for **TNT-MIPS**.

MicroImages Space Expansion

Additional floor space has been leased by MicroImages in an adjacent area of the same building on the first floor bringing the total area occupied to somewhat less than 12,000 square feet. The MicroImages staff will now be distributed over four building levels but direct internal access is available to all the space via new passageways and doors creating a maze. The new floor space will be used to reorganize our business office into one contiguous area while freeing up various empty offices for possible future expansion in various existing functional team areas. Moving into this area will not be undertaken until after the **AUW5** when the empty space will be used for meeting and exhibit areas.

Missing features to ship as V4.11

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27 January 1993 development cut off date
7 February 1993 shipping date
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General utility materials

- MicroImages' combined 16- and 24-bit X server, now referred to as the MIX server for Microsoft Windows **V3.1** [available now but several other programs such as display need to be adjusted to support 24 bit displays ***]
- Completed sections of on-line manual
- Slide show process

Object display and editing

- Additional display processes
  - Pin mapping
  - Histograms of raster objects
  - Profile raster objects
  - Missing measurement tools

Object utilities

- Import/export of raster/vector/CAD objects [most important formats are now available, if one you need is missing please contact Technical Support to request it be prepared and shipped to you]

Object conversions

- Warping vector/CAD objects
- Copying vector/CAD objects [vector available now ***]

Object display and editing

- Capturing of live video [the TARGA and TARGA + video capture boards are already supported ***]
- Mosaicking of raster objects [needs trend removal, between frame color balancing, and abut method of seam formation ***]
- Smart line following in interactive editing of CAD objects.
- Interactive editing of vector objects [available shortly pending finding an error ***]
- Georeferencing vector/CAD objects and changing projection

Image and GIS processing

- Progressive image transformation

Hardcopy Creation

- Raster printing [needs additional resampling techniques and printing from a file]

Raster object creation

- Import raster object from 8 mm and open reel tape
- Scanning [needs additional scanners supported and screen preview added]

******* Contact Technical Support for possible special shipping of these processes which may now be available by now to ship.