

D I G I T A L A R T S

DGS 2.0 Pricelist - July 1987

Digital Arts DGS 2.0 software is available as separate modules, a complete software system, or a turnkey hardware/software package depending on your particular needs. Your local Digital Arts dealer can help you to configure a system that meets your requirements.

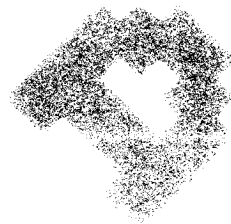
Software Pricing

DGS 2.0.....	\$15,000
DGS Build.....	5,000
DGS Animate.....	5,000
DGS Render.....	6,000
DGS Paint (TARGA frame buffers only).....	1,250
DGS Fonts 1.....	500
DGS Effects.....	2,500
DGS 2.0 Software Maintenance (12 months).....	1,500

Approximate Hardware Pricing

System Hardware Option.....	\$17,500-25,000
Video Hardware Option #1.....	17,500
Video Hardware Option #2.....	44,000
Film Option.....	12,750

D I G I T A L A R T S



DGS Animate

DGS Animate is used to set up animation for models that have previously been created and includes the following modules:

- Scenes Scenes is used to specify the motion paths of objects (called "Actors") in 3 dimensions. When specifying object motion, all aspects of an actor may be animated, including surface characteristics such as color and level of transparency. Actor motion may be specified as linear, interpolating spline, or approximating spline, with full control over the kinetics of each actor including position, rotation, and scaling in the X, Y, and Z directions. Up to 6 light sources may be specified, with the ability to animate the color, intensity, and position of each. Separate camera control is also available. Each actor, including surfaces, lights, and the camera, may have different key frame position information, and the keyframes do not need to be evenly spaced for an actor nor do they have to agree in number or position between actors in a scene. At any time, stored images may be brought into the background to assist in the positioning of actors. Hierarchical motion is available with multiple levels for all actors including light sources and the camera. Hierarchical tension allows hierarchy to be assigned with either a constant or variable relationship between attached actors. Real-time monochrome preview allows review of up to 600 frames of animation at any point and any speed.
- Produce Produce is primarily used to create a production schedule for mattes, renders, and records. Once created, this schedule can be run for full batch production of animation. The Produce program also includes options for running standard DOS programs as well as other DGS 2.0 modules, and includes variables which can be set and passed through to any of these programs.
- DOS Shell The DOS Shell allows the user to exit DGS 2.0 temporarily for execution of standard DOS functions such as changing directories, editing files, etc. Control returns to DGS 2.0 at the same point from which the DOS shell was invoked.

S O F T W A R E



DGS Render

DGS Render is used to create full or fast image renderings and mattes, as well as to set colors for objects and lights. It includes the following modules:

Colors

The Colors module is used to interactively adjust surface and lighting characteristics for a scene. A series of rendered spheres are used to show different levels of the various surface characteristics, and once a setting has been chosen, a new sphere may be shown with exactly those characteristics. Light source position and falloff may be explicitly set. Color and lighting information may be easily transferred between scenes to allow consistency of color from animation to animation. To aid the user in determining which surfaces are being used, object files may be selected and the surfaces being used by those objects can be displayed.

Render

Images may be rendered at any time. Each image can contain over 32,000 polygons. Color and position information are obtained either from the last position in the 3-D Builder module or from an animation control file created with the Scenes module. Our rendering algorithm allows for full calculation of actor intersections and maintains antialiasing throughout the image. In addition, texture, bump, transparency, and/or reflection maps may be applied to 2 and 3-D surfaces. Light source falloff allows the simulation of different kinds of lights including spotlights. Images may be rendered to the screen only, to disk, or recorded directly onto videotape or film in a frame by frame manner (with optional hardware). Rendering resolution is fully definable up to a maximum of 4096x4096 pixels.

Fast Render

The Fast Render module is available for those times when it is not necessary to see a fully rendered image, such as when testing color and light positioning before doing a final rendering. This module may be used to obtain previews of images in either anti-aliased wire-frame or gouraud shaded, aliased form. Texture mapping may also be applied if desired. These images are displayed at screen resolution only and are not saved to disk.

Matte

Image combinations (mattes) may be created at any time. Functions include addition, subtraction, and dissolving of images, with both antialiasing and transparency maintained.

(over please)

D I G I T A L A R T S



DGS 2.0 Software Options

Certain software options are available to provide additional capability to your DGS 2.0 system. These options have been integrated into the DGS 2.0 system as much as possible and include:

Paint This integrated software option is used to create 2-D artwork and to input video images to the system. Once saved, these images can be used as backgrounds, textures, or traced for 3-D object creation.

Fonts 1 This integrated software option provides a set of four high quality fonts to create 2 or 3 dimensional text strings. Fonts provided are Rho Bold, Omicron Extra Bold, Eta Bold, and Sigma Medium. Additional fonts will be developed in the future.

Effects This integrated software option provides a set of imaging utilities that can be used to do high resolution painting, image translation, color manipulation, and to create special effects such as starfields, mosaics, blurs, and fades to black and white.



DGS 2.0 Hardware Guide

DGS 2.0 software can be used with a variety of computers and computer peripherals. The following information is provided for your convenience. Your local dealer can work with you to customize a system to your situation.

System
Hardware
Option

This option includes the required and recommended computer hardware to create 2-D and 3-D images as follows:

Required Hardware:

PC AT compatible with 1.2 MB floppy and 40 MB fixed disk
AT & T TARGA or VISTA Frame Buffer Card with overscan
Definicon DSI-780/4 or DSI-780+/4 Processor with 4MB RAM
Digitizing Tablet or Microsoft compatible mouse
80287 Math Coprocessor
Color Graphics Adapter Card and Monitor
13" RGB Monitor w/ Long Persistence Phosphor

Recommended Hardware:

20 MB Removable Hard Disk
RGB/Composite Video Camera

Video
Hardware
Option #1

This option is used for industrial quality 3/4" video and includes:

Lyon Lamb ENC VI Encoder/Sync Generator
Lyon Lamb MINIVAS Animation Controller
RGB Decoder
NTSC Monitor
SONY VO-5850 3/4" Industrial Editing VTR

Video
Hardware
Option #2

This option substitutes a SONY BVW-40 Betacam 1/2" Editing VTR (\$32,500.00) for the VO-5850 in Video Hardware Option #1 for broadcast quality 1/2" video.

Film
Option

This option allows images to be rendered to 35mm film through a digital camera and includes:

Matrix PCR Digital Film Recorder with 35mm camera
GPIB interface card



DGS Build

DGS Build is primarily used to create 2-D and 3-D models for animation and rendering. It can also be used to do preview rendering of models to check construction, colors, and light source positioning. DGS Build includes the following modules:

2-D Build The 2-D builder allows creation of 2 dimensional shapes or control graphs. Using lines, arcs, and two different types of splines, virtually any shape may be quickly and easily created. Once input, control points can be adjusted individually or in groups, and may be retyped between line and spline at any time. In addition, mirror and pattern functions are available for the creation of objects with symmetry. Boolean operations allow new shapes to be created from any two existing shapes, and deformation may be accomplished through rotate, translate, scale, and shear functions. If necessary, a background image may be loaded at any time for use as a reference. Another reference is the scratchpad function, which allows a string of operations to be saved and performed again when desired. Shapes may be saved to disk in two dimensions, or may be transferred to the 3-D builder automatically. In addition, the control graph of a shape may be saved for bicubic patch modeling. The graph may be a closed polygon for the creation of curved objects or open for the creation of surfaces.

3-D Build The 3-D builder is used for a variety of functions. It can take 2-D shapes and turn them into 3-D objects through the standard functions of extrude, rotate, translate, scale, and shear. Pipes and holes may also be created, and any two polygons with the same number of vertices may be connected at any time. Connections may be through either rectangles or triangles to allow deformation without creating warped surfaces. The 3-D builder can also take a series of control graphs and create bicubic patch (spline-based) models that are linear, curved or surfaces of revolution. The 3-D builder is also used to apply texture to objects and surfaces so that they may be texture, bump, or transparency mapped. In addition to the standard view, a 4-view mode is available to aid in the deformation of objects. Once created, objects and surfaces may be deformed in a variety of ways starting with the standard functions of rotate, translate, scale, and shear. Taper, twist, and bend can also be used to dynamically create new forms from existing objects. A unique feature called sculpt can be used to deform an object or surface based on the values of its texture, which may be either painted in the 3-D builder or recalled from a previously created image.

(over please)

DGS 2.0

Digital Arts DGS 2.0 software is the latest version of our advanced 3-D software for the PC environment. Utilizing off the shelf hardware, our open system features full 32 bit floating point accuracy and ascii data files for easy editing or translation into other formats. Visually, the software includes popup and drop menus, and a choice between real-time visual interaction and explicit input for most functions. In many cases, both the visual commands and the explicit input may be saved and later recalled, forming the basis for a powerful procedural modeling/animation language. Each module of the DGS 2.0 system may be invoked directly from the DOS command line or through a menu selection. These modules are as follows:

- 2-D Build To create 2-D shapes and control graphs.
- 3-D Build To create 3-D polygonal and bicubic patch models.
- Scenes To specify the motion paths of objects in 3 dimensions.
- Colors To interactively adjust surface and lighting characteristics for a scene.
- Render To create fully anti-aliased images of over 32,000 polygons with resolution up to 4096x4096.
- Fast Render To create anti-aliased wire-frame or aliased gouraud shaded renderings.
- Matte To combine rendered images including addition, subtraction, and dissolving.
- Sight To interactively create single renders, combine rendered images, generate smooth backgrounds, and read and save images.
- Produce To create a production schedule for mattes, renders, and records.
- DOS Shell To allow the user to exit DGS 2.0 temporarily for execution of standard DOS functions.

For a more complete description of each module, please refer to the separate sheets on DGS Build, DGS Animate, and DGS Render.



D I G I T A L A R T S

DGS 2.0 Pricelist - July 1987

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Video Hardware Option #1.....	17,500
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Film Option.....	12,750

LYON LAMB VIDEO ANIMATION SYSTEMS, INC.

SYSTEMS (Vista Based):

System 2/40 (Vista)	Video Converter File Server (Vista Based) (System Allows Import/Export of Workstation Graphic Images to Video Tape via Ethernet in TCP/IP Format)	\$34,950.00
System 3/40 (Vista)	Video Converter File Server Package with Graphics Tablet and Video Paint Package (Targa Based)	\$36,500.00

SUPPORTED OPTIONS:

<u>MAKE/MODEL</u>	<u>DESCRIPTION</u>	<u>SYSTEM PRICE CHANGE</u>
<u>VIDEO DECODING DEVICES</u>		
1A. For-A CT-500	Betacam to RGB Transcoder in lieu of DEC-100	Add \$600.00
<u>COLOR MONITORS</u>		
2A. ElectroHome EVM-1311	High Performance RGB Only Monitor in lieu PVM-1271Q	No Price Change
2B. Sony PVM-2030	20" RGB/Composite Video Monitor	No Price Change
<u>ETHERNET PRODUCT</u>		
3A. DEC Deleni Box	Multi Connection Box	Add \$1,450.00
<u>INSTALLATION</u>		
4A. On-Site	Multi Connection Box	\$600.00/Day (Per Person + Expenses)

Prices Subject to Change Without Notice

4531 EMPIRE AVENUE, BURBANK, CALIFORNIA 91505 • 818/843-4831 • TECHNICAL AWARD 1979
TELEX 298185 • FAX 818/843-6544



OSCAR ©A.M.P.A.S.®

LYON LAMB VIDEO ANIMATION SYSTEMS, INC.

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LYON LAMB VIDEO ANIMATION SYSTEMS, INC.

PRICE LIST

Effective May 1, 1988

ANIMATION CONTROLLERS:

VAS Delta	(Frame-by-Frame Animation Controller with Manual Front Panel Entry as well as RS-232 Input. 24/30/60 fps, Sony BVH-2000, BVH-2500, BVU-800, BVU-820, BVU-850, BVU-870, BVW-40)	\$12,500.00
VAS IV	(Frame-by-Frame Animation Controller with Manual Front Panel Entry as well as RS-232 Input, 30 fps)	\$ 9,850.00
VAS IV PAL	(Frame-by-Frame Animation Controller with Manual Front Panel Entry as well as RS-232 Input, 25 fps)	\$ 9,850.00
VAS V	(Frame-by-Frame Animation Controller with Manual Front Panel Entry as well as RS-232 Input, 30 fps, RS-232 control only)	\$ 8,850.00
Mini Vas	Frame-by-Frame Animation Controller	\$ 4,980.00
VAS Tools	MS DOS Based Applications Program for VAS Animation Controllers	\$ 50.00
Additional VTR Interfaces for VAS IV, VAS V and VAS Delta		\$ 1,500.00
Frame Buffer Triggering Software for VAS IV and VAS V		\$ 500.00

COLOR ENCODER/SYNC GENERATOR:

ENC VI	Color Encoder/Sync Generator w/Internal Color Bar/Black Burst Generator	\$ 4,500.00
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HIGH RESOLUTION RGB TO NTSC VIDEO CONVERTER:

HRC	Converts up to 1280 x 1024 60 Hz. Non-Interlace RGB Video to NTSC Video or Low Resolution 525-Line RGB with no Loss of Graphic Information	\$21,950.00
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SYSTEMS (Targa Based):

System 1	RGB Encoder/Animation Controller Package	\$12,500.00
System 2/40	Video Converter File Server (Targa Based) (System Allows Import/Export of Workstation Graphi Images to Video Tape via Ethernet in TCP/IP Format)	\$33,500.00
System 3/40	Video Converter File Server Package with Graphics Tablet and Video Paint Package (Targa Based)	\$34,950.00

Prices Subject to Change Without Notice.

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TELEX 298185 • FAX 818/843-6544



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LYON LAMB VIDEO ANIMATION SYSTEMS, INC.

LYON LAMB VIDEO ANIMATION SYSTEMS, INC. SYSTEM 1, 2, and 3

The Lyon Lamb Video Animation System 1, 2 and 3 are designed to be a complete solution for the system requirements of video input and output with a computer graphics workstation. Each system is completely wired and tested in a standard 19" rack, ready for simple connection to your computer graphics system.

SYSTEM 1

Provides the capability of recording RS-170A RGB on a frame-by-frame basis to a video tape recorder. System 1 includes the Lyon Lamb ENC VI NTSC encoder/sync generator, Mini Vas animation controller, and NTSC monitor in a rack. Communication to the animation controller is via an RS-232 serial port on the host computer. Field-accurate recording is assured through the use of Lyon Lamb's Proprietary Vertical Interval Frame Code. SMPTE time code reference is also available with the Mini Vas.

*ENC VI Color Encoder

Full bandwidth RGB encoder to RS-170A composite and betacam component video output. ENC VI internal sync generator allows for genlock of RGB devices or as a slave to incoming sync from RGB source. Internal color bars are provided for signal reference.

*Mini Vas Animation Controller

Video tape recorder interfaces software resident without the need for additional hardware add-on's, from Sony VO-5850 to Sony Broadcast, Ampex and Hitachi Broadcast VTR's as well as the Abekas digital disc recorder.

Proprietary Vertical Interval Frame Code (VIFC) for field accurate recording and editing.

*RGB/NTSC 12" MONITOR

*RACK w/WIRING

*AC POWER STRIP

*VIDEO TAPE RECORDER (optional)



LYON LAMB VIDEO ANIMATION SYSTEMS, INC.

SYSTEM 2

Features frame-by-frame recording plus the capability of image capture and storage from either video camera, video tape recorder or digital disk. Once captured, the image can be requested via Ethernet by the host computer. No user interaction with the local PC is required. All communication and image file transfer is performed over the Ethernet connection.

All of system 1 features, plus:

- *Full control of Mini Vas from computer graphics workstation
- *Image capture from camera, video tape recorder or digital disk via Ethernet
- *All/communication via Ethernet TCP/IP FTP link

PC Graphics:

*Images transfer from host computer graphics workstation via Ethernet to PC Targa Board for image output

*Images transfer to host computer graphics workstation via Ethernet activated from host computer

*Background render to frame buffer and automatic recording to video tape

*PC/AT

*2.5 MB Ram

*1.2 MB Floppy

*40 MB Hard Disk

*Ethernet Board/Software

*24 Bit Targa Board

*System Software

SYSTEM 3

Adds the capability of video painting. Images that have been captured can be modified and stored before being requested by the host graphics system. System 3 includes a digitizing tablet Video Painting Software.

All of System 2 features, plus:

- *Video Paint Software
- *Digitizing Tablet
- *32 Bit Targa Board in Lieu of 24 Bit Board



CCA proposes that a joint project between Vasulka Inc. and The Center for Contemporary Arts be implemented. It will be designated Computer Arts Research (CAR). Its purpose is to provide research and development of the aesthetics and processes of computer generated artworks. This new work will be generated by CAR staff and through a program of artists in residence. Some aspects of this system are:

- 1) CAR system is jointly owned by CCA and Vasulka Inc. based on prorata investment.
- 2) System will be dedicated to a project called Computer Arts Research (CAR)
- 3) System will be housed at Vasulka Inc. or at CCA as agreed by both parties.
- 4) Woody Vasulka will be Creative Director of CAR. His duties will be to
 - a) develop and fully activate the system which will consist of:
 - b) utilize the system for personal art projects.
 - c) serve on an Advisory Committee for CAR to be selected by CCA. The Advisory Committee will implement an artists in residence program and select artists to participate in same.
 - d) provide instruction or be available to users, or provide a technician to instruct and work with artists. Such a technician would be trained initially by Woody Vasulka and will trade his/her services for personal use of equipment.
- 5) CCA will endeavor to raise additional funds to retain Woody Vasulka as Creative Director of CAR. The fee for services to him will be determined by CCA once funding is available. Funds may be raised from grants, from commercial or artist rental of CAR facility.
- 6) There will be at least 6 resident artists annually at CAR. These will be selected nationally by the Advisory Committee. Their residency may be from 2 weeks to one year in duration. The CAR facility will be available for residencies 40 hours per week.
- 7) CCA has no rights to any materials produced on CAR unless specifically contracted. These productions will be the property of the artist unless otherwise designated. CCA and CAR will be credited on projects produced on CAR.
- 8) In the event that Woody Vasulka is traveling or otherwise not available the CAR system will be made available for the purposes stated herein.

9) CCA will invest no less than \$7500 in the CAR system. Negotiation with Digital Arts will be made jointly. Total system price is \$24,500 for the complete Digital Arts system plus shipping. CCA owns 31% of CAR, Vasulka Inc owns 69% of CAR.

10) The first six months of operation will be used by Woody Vasulka to learn about and refine operation of the CAR system. During this time the Advisory Committee will design and implement the Residency Program. The first artist in residence will begin after 6 months.

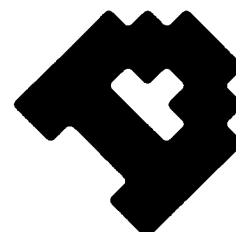
11) Revenues from the CAR system for rentals will be utilized in the following way:

a) \$1,000 per artist in residence goes to Creative Director for his services

b) The rest goes into a fund to pay for main^{tenance}~~stream~~ upgrades, repairs and add^{ministration}

The Advisory Committee will decide the revenue generating rates and uses. These uses will not supercede use by the Creative Director or artists in residence.

12) The CAR system may be sold only to either Vasulka Inc. or to CCA by mutual consent at a mutually agreeable price.



D I G I T A L A R T S

I N V O I C E

Invoice #: 1217 (REF:DEMOPNT)

Reference P.O. #: verbal-W. Vasulka

Date: August 19, 1988

Bill to: The Vasulkas Inc.
 Route 6, Box 100
 Albuquerque, NM 87501

Item#	Quantity	Description	Price
1	1	19" RGB/Multisync Upgrade	<u>\$ 750.00</u>
Total:			\$ 750.00

Terms: Payable Upon Receipt

7370-0
OPPORTUNITY
ROAD
SAN DIEGO
CALIFORNIA
92111-2225
(619) 541 2055
TELEX
6503050035MCI UW

Joy Systems

SYSTEM CONFIGURATION

SYSTEM TEST: START DATE 7/13/88 START TIME 09:00
END DATE 7/15/88 END TIME 10:00

CONFIGURATION:

JS286 JS386 _____ SERIAL NUMBER EE52334V 54768

SPEED 8MHZ 10MHZ _____ 12MHZ _____ 16MHZ _____ MEMORY UPGRADE 512K

FLOPPY DRIVE 1 TYPE TEAC 1.2MB SERIAL NUMBER 3779945

FLOPPY DRIVE 2 TYPE _____ SERIAL NUMBER _____

HARD DRIVE 0 TYPE Seagate ST-251 40MB SERIAL NUMBER MC-10856

HARD DRIVE 1 TYPE _____ SERIAL NUMBER _____

MONITOR TYPE SAMSUNG AMBER SERIAL NUMBER 80404220

VIDEO ADAPTER EV-231C MONO CARD SERIAL NUMBER AQY-0006420

OTHER _____ SERIAL NUMBER _____

OTHER _____ SERIAL NUMBER _____

OTHER _____ SERIAL NUMBER _____

OTHER _____ SERIAL NUMBER _____

OTHER _____ SERIAL NUMBER _____

OTHER _____ SERIAL NUMBER _____

NCS SERVICE AGREEMENT Y _____ N _____ SERIAL NUMBER _____

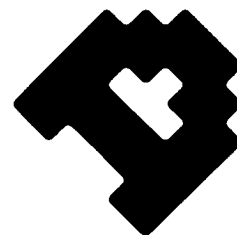
UPGRADE CONFIGURATION BY MT CHECKED BY NA 286

PREPARATION BY GC Keys

QUALITY CHECKED BY JCH

BOXED BY al

D I G I T A L A R T S



P A C K I N G L I S T

Invoice #: 1207 (REF:1207)

Reference P.O. #: VERBAL W. VASULKA

Date: July 29, 1988

Bill to: THE VASULKAS INC.
ROUTE 6, BOX 100
ALBUQUERQUE, NM 87501

Shipped to: THE VASULKAS INC.
ROUTE 6, BOX 100
ALBUQUERQUE, NM, 87501

Item#	Quantity	Description
1	1	Joy Systems Computer
2	1	80287 Coprocessor
3	1	Parallel/Serial Card (1/2)
4	1	Vega Delux Card
5	1	AT Vista 4M
6	1	Definicon DSI-780+/4

Shipped Via: UPS Ground

7370-0
OPPORTUNITY
ROAD
SAN DIEGO
CALIFORNIA
92111-2225
(619) 541 2055
TELEX
6503050035MCI UW


SOLD TO FILM/VIDEO

SHIPPED TO

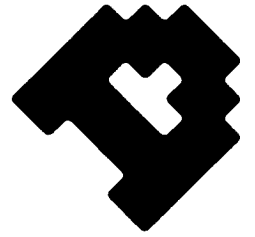
THE VASULKAS INC

800 SOUTH JASON
DENVER CO. 80223

RT6, Box 100
SANTA FE, N.M.
87501

CUSTOMER'S ORDER	SALESMAN	TERMS	SHIPPED VIA	F.O.B.	DATE
PLEASE FIX THIS BELT					
BATTERIES CAPUT!					
(CALL STEINA					
505 471 7181					
THANKS MATRIX  TOKYO KINOSHITA DUNN INSTRUMENT					
ALUMINA HOLLAND					
VIDEO IMAGE					
213 822 8872					
4 213 471 1798					

D I G I T A L A R T S



P A C K I N G L I S T

Invoice #: 1207 (REF:1207)

Reference P.O. #: VERBAL W. VASULKA

Date: July 29, 1988

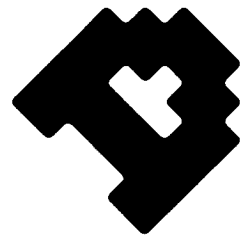
Bill to: THE VASULKAS INC.
ROUTE 6, BOX 100
ALBUQUERQUE, NM 87501

Shipped to: THE VASULKAS INC.
ROUTE 6, BOX 100
ALBUQUERQUE, NM, 87501

Item#	Quantity	Description
1	1	Lyon Lamb MINIVAS (5850)

Shipped Via: UPS Ground

7370-0
OPPORTUNITY
ROAD
SAN DIEGO
CALIFORNIA
92111-2225
(619) 541 2055
TELEX
6503050035MCI UW



D I G I T A L A R T S

P A C K I N G L I S T

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ALBUQUERQUE, NM 87501

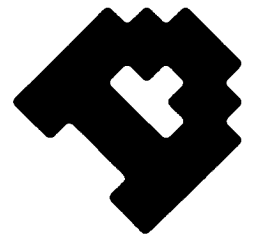
Shipped to: THE VASULKAS INC.
ROUTE 6, BOX 100
ALBUQUERQUE, NM, 87501

Item#	Quantity	Description
1	1	Calcomp Data Tablet
2	1	Software Protection Block

Shipped Via: UPS Ground

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ROAD
SAN DIEGO
CALIFORNIA
92111-2225
(619) 541 2055
TELEX
6503050035MCI UW

D I G I T A L A R T S



P A C K I N G L I S T

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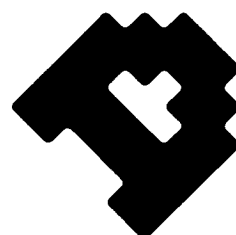
Bill to: THE VASULKAS INC.
ROUTE 6, BOX 100
ALBUQUERQUE, NM 87501

Shipped to: THE VASULKAS INC.
ROUTE 6, BOX 100
ALBUQUERQUE, NM, 87501

Item#	Quantity	Description
1	1	Multi-Sync Monitor

Shipped Via: UPS Ground

7370-0
OPPORTUNITY
ROAD
SAN DIEGO
CALIFORNIA
92111-2225
(619) 541 2055
TELEX
6503050035MCI UW



D I G I T A L A R T S

P A C K I N G L I S T

Invoice #: 1207 (REF:1207)

Reference P.O. #: VERBAL W. VASULKA

Date: July 29, 1988

Bill to: THE VASULKAS INC.
ROUTE 6, BOX 100
ALBUQUERQUE, NM 87501

Shipped to: THE VASULKAS INC.
ROUTE 6, BOX 100
ALBUQUERQUE, NM, 87501

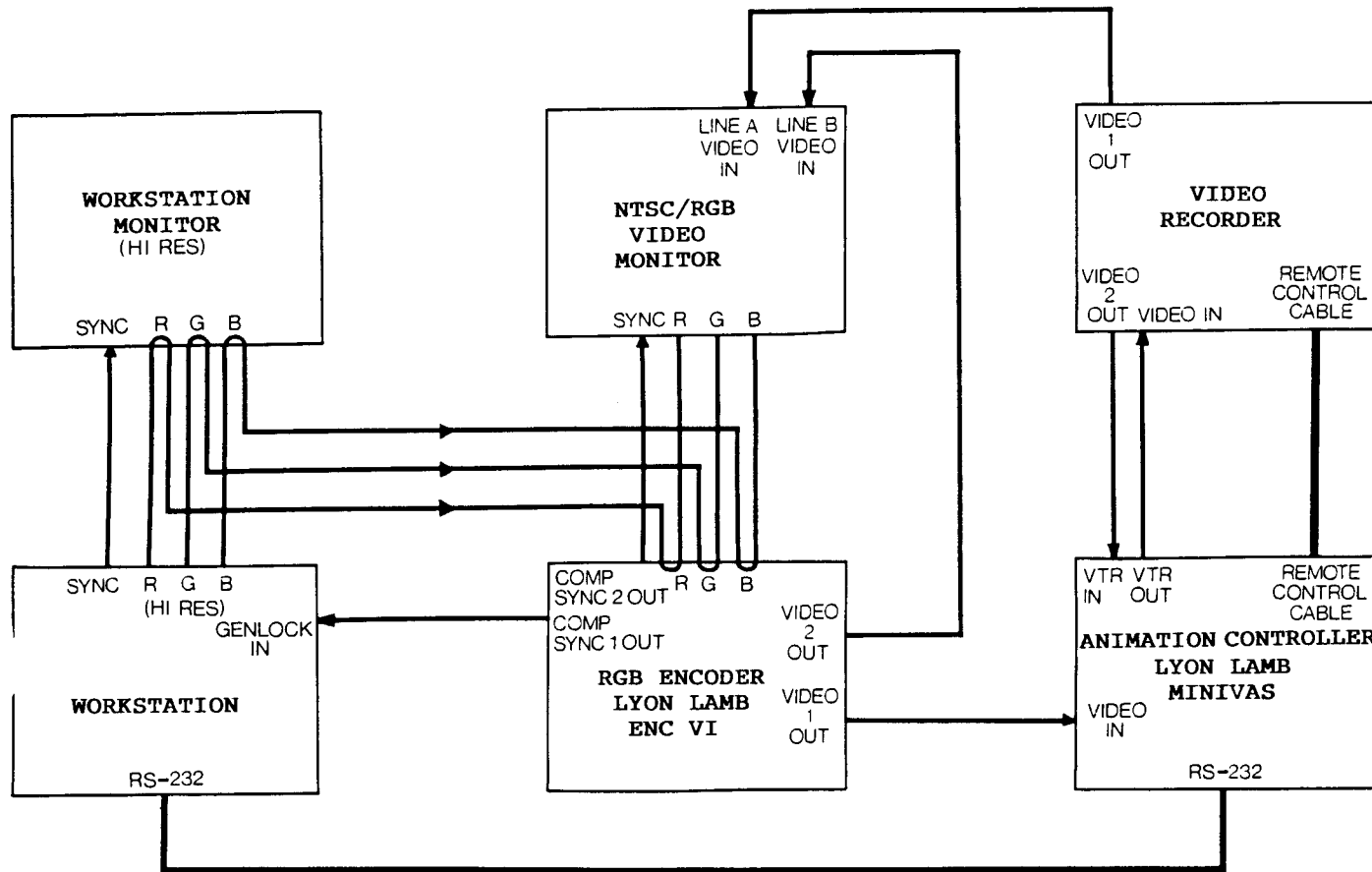
Item#	Quantity	Description
1	1	Electrohome Monitor Base

Shipped Via: UPS Ground

7370-0
OPPORTUNITY
ROAD
SAN DIEGO
CALIFORNIA
92111-2225
(619) 541 2055
TELEX
6503050035MCI UW

System 1

Video Graphics Workstation Cable Connection Diagram

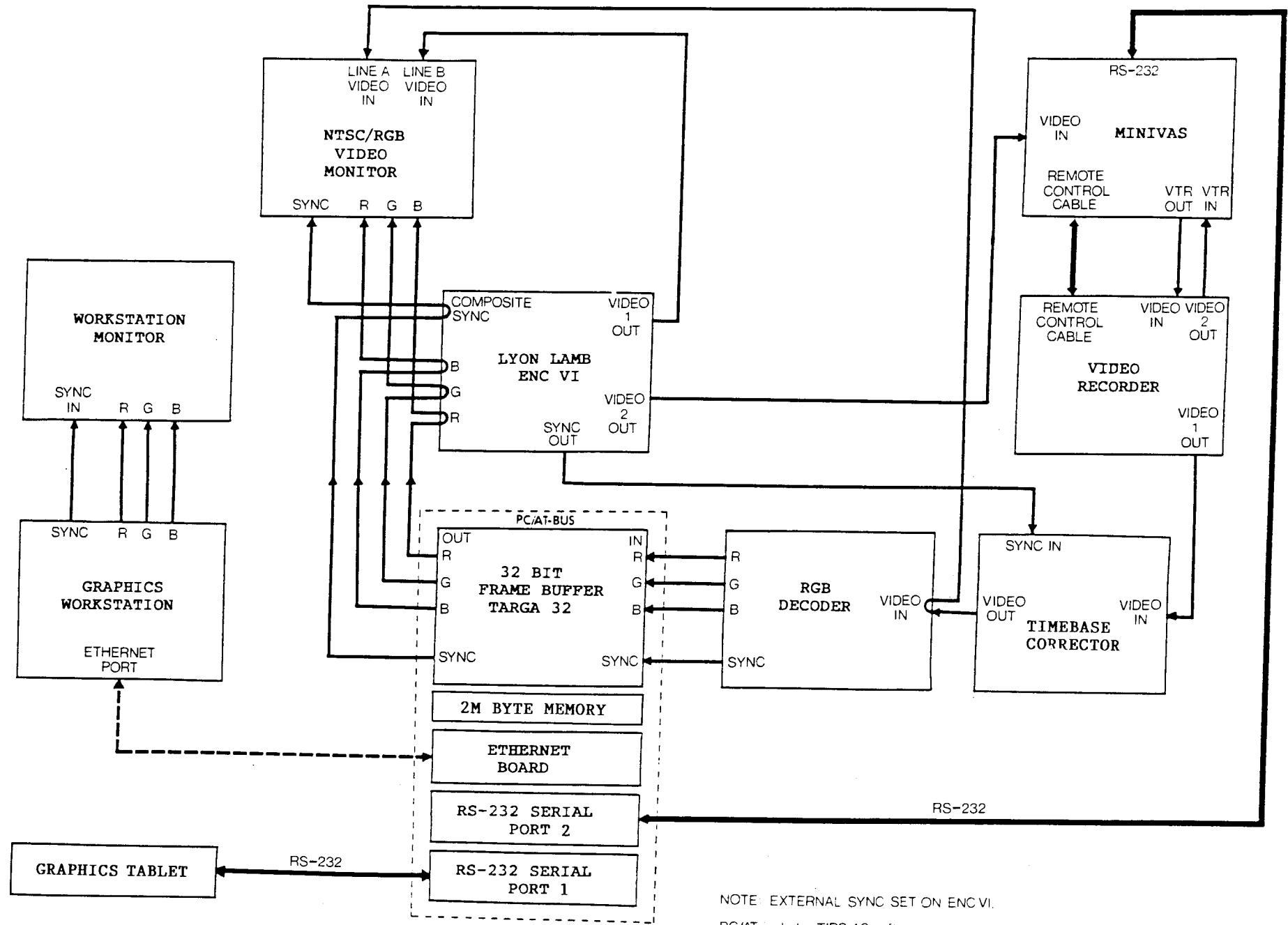


NOTE: ENC VI set for INTERNAL SYNC.

LYON LAMB V.A.S., INC.
4531 EMPIRE AVENUE
BURBANK, CA 91505
(818) 843-4831

System 3/40

Cable Connection Diagram



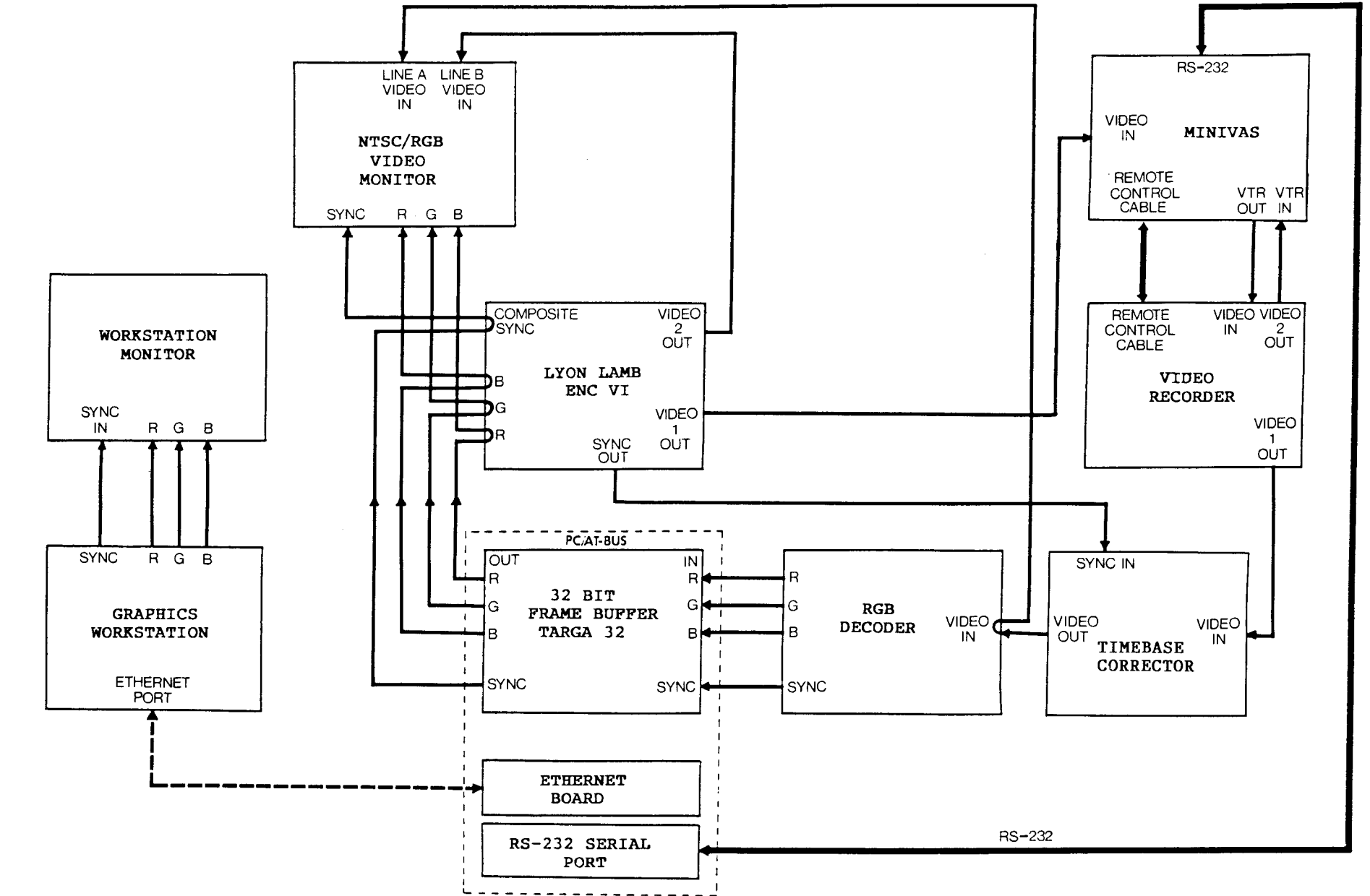
NOTE: EXTERNAL SYNC SET ON ENC VI.
 PC/AT includes TIPS 40 software.

CO-AXIAL CABLE
 REMOTE CONTROL CABLE
 ETHERNET

LYON LAMB V.A.S., INC.
 4531 EMPIRE AVENUE
 BURBANK, CA 91505
 (818) 843-4831

System 2/40

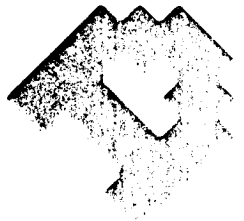
Cable Connection Diagram



NOTE: EXTERNAL SYNC SET ON ENC VI.

CO-AXIAL CABLE
 REMOTE CONTROL CABLE
 ETHERNET

LYON LAMB V.A.S., INC.
 4531 EMPIRE AVENUE
 BURBANK, CA 91505
 (818) 843-4831



D I G I T A L A R T S

June 2, 1988

Mr. Woody Vasulka
Route 6, Box 100
Santa Fe, NM 87501

Dear Woody:

It was a pleasure speaking with you again the other day. As we discussed, both Bruce and I are tremendously excited about the possibilities of you working with our software and hardware. Because of that, we are willing to make you what can only be described as "The Deal of the Century."

Good luck in lining up the financing. This quote is valid for at least the next 90 days to insure that you have enough time to complete your arrangements. Please call Bruce or I if you have any questions.

Sincerely,

Sheldon L. Liebman
VP/ Sales and Marketing

Enclosures

cc: Mr. Bruce Lyon

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[E&A]

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***** END USER *****

We at the Digitizer Products Division of CalComp are sincerely interested in the quality of our products during the production and post-production phases of the product's useful life.

The first phase of the product's useful life, the production cycle, is closely monitored to provide you with the best system possible. The second phase of the product's useful life, the installation and system checkout cycle, requires customer input to allow us to monitor the system. This phase, if properly monitored, will provide several distinct benefits to each of us including, but not limited to, the following:

1. Insure that you, the Customer, are provided with the exact system ordered. Should any problems exist, the corrective action process is initiated.
2. Insure that you have sufficient documentation to operate and interface our system with other products.
3. Provide us, the manufacturer, with necessary feedback to identify problems you, the Customer, experienced during installation. This feedback allows us to better design future units and documentation for end user installation.

Please take an additional few minutes to fill out and return the prepaid installation report so that we may better prepare each system for your satisfactory operation. Your constructive comments are a welcomed and valued source for product quality improvements. The installation report should be utilized as follows:

- White Copy - Complete and mail this report after product installation.
- Yellow Copy - This copy is for your records, warranties, etc.
- Green Copy - Complete and mail this copy to report any equipment failures which may occur after initial installation.

The following dispatch offices are available to assist you during or after field installation:

Seattle	(800) 451-PL0T
Los Angeles	(800) 247-5750 in CA; (800) 331-0352 Outside CA
Denver	(800) 433-1294
Atlanta	(800) 342-7371 in GA; (800) 962-2667 Outside GA
Houston	(800) 433-4915
Detroit	(800) 247-7251 in MI; (800) 962-5337 Outside MI
Boston	(617) 890-4850 in MA; (800) 225-4516 Outside MA
Washington, D.C.	(800) 622-2124 in VA; (800) 255-0686 Outside VA

90000-000136 REV. B

MODEL:

23 120

LISTED 9977 AIRMOBILE DIST.

MINI COMPUTER DESCRIPTION OF EQUIPMENT

WITH 640K RAM

VEGA de LUX
 EGA CARD

8MHZ COMPUTER	MO JS286	#EE52334
1,2 MB FLOPPY DRIVE	MO TEAK	#3779945
HARD DRIVE CONTROLLER	MO EV-332	#VV54768
40MB HARD DISC DRIVE	MO ST 251	#MC-10856
MONOGRAPHICS CARD	MO EV-231-C	#AQY-0006420
CALCOMP DRAWING BOARD	MO 23120	#GA04363
ELECTROHOME COLOR MONITOR	MO 38-DIONSA-YP	#613010131
MITSUBISHI COLOR MONITOR	MO AUM-1381A	#101557
COMPUTER KEYBOARD	MO 2186079	#2693
VIDEO CONTROLLER	MO MINIVAS	#1314

DEFINICON DSI = 780+ / 4 COOPROCESSOR CARD
 AT VISTA 4MB FRAME BUFFER
 80TB - AND DISC
 MOUNTED VIEW TAPES DRIVE

QUANDO HOME

Symbol No. CM T8 01 11 88

PRODUCER GRUBESIC ASSOCIATES INC. F1384
 CP-5230 New 11-86 Printed in U.S.A.

Page 5 of 5
 OFFICE ALB0/003



System Proposal - Woody Vasulka
Digital Arts DGS 2.1 System

The following system price is valid at least through 9/1/88:

Software Items

DGS 2.1 Software
DGS CSM
DGS FX
TrueVision VISTA TIPS Paint \$ 9000.00

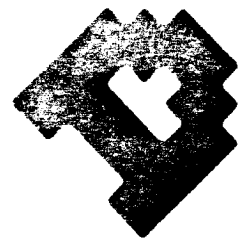
Hardware Items:

PC AT Computer with 640K RAM, 40MB Hard Disk
CGA Card and Monitor
80287 Math Coprocessor Chip
TrueVision ATVISTA 4MB Frame Buffer
DSI-780+/4 Coprocessor Card
Data Tablet
13" RGB Monitor
Lyon Lamb MINIVAS Animation Controller \$15500.00

Total System Price: \$24500.00

Shipping and Handling not to exceed \$500.00

TAM



D I G I T A L A R T S

I N V O I C E

Invoice #: 1207 (REF:DEMOPNT)

Reference P.O. #: verbal-W. Vasulka

Date: July 29, 1988

Bill to: The Vasulkas Inc.
Route 6, Box 100
Albuquerque, NM 87501

Shipped to: The Vasulkas Inc.
Route 6, Box 100
Albuquerque, NM 87501

Item#	Quantity	Description	Price
1	1	DGS Software: DGS 2.1 DGS CSM DGS FX DGS PAINT (VISTA)	\$ 9000.00
2	1	DGS Hardware: PC AT 80287 Math Coprocessor Vega Deluxe Card Multisync Monitor ATVista 4M DSI-780+/4 Data Tablet 19" RGB Monitor Animation Controller	15500.00

ELECTROHOME

PHOTO 12

Sub-Total: \$24500.00
Shipping and Handling: 250.00
Total: \$24750.00
Less Deposit received: 15500.00
Total Now Due: 9250.00

Terms: Payable Upon Receipt

TOTAL
OPERATIONAL
ROAD
CANDID
CALIFORNIA
EDUCATION
ELECTROHOME
TELEVISION
ELECTROHOME

July 10, 1984

"GEL" EQUIPMENT INVENTORY LIST

<u>Model</u>	<u>Description</u>	<u>Price</u>
SUN-2/120	Deskside TM SunStation - Monitor, keyboard, and mouse pointing device. - Four Boards: MC68010 CPU and two RS-423 serial lines. Monochrome video controller board. 1.0 MByte main memory board. Sun Multibus ^(R) Ethernet interface. - Nine Slot IEEE-796 (Multibus) card cage	\$16,900
Option 10	Main Memory Expansion	\$ 3,300
Option 29	Add SunColor graphics capabilities (19 inch monitor)	\$ 7,400
Option 63	130 MByte (formatted) disk substation.	\$13,900
Option 73	1/4 inch cartridge tape subsystem.	\$ 4,000

45,600.00



SUN
microsystems

REMIT TO: SUN MICROSYSTEMS, INC.
P.O. BOX 728 SANTA CLARA, CA 95052

2550 Garcia Avenue
Mountain View, CA. 94043
TLX 469327 (415) 960-1300

INVOICE

B
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CENTER FOR CONTEMPORARY ARTS
OF SANTA FE
ATTN: ACCOUNTS PAYABLE
PO BOX 148
SANTE, FE, NM

87504

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O

CENTER FOR CONTEMPORARY ARTS
OF SANTA FE
1050 OLD POCOS TRAIL
SANTE, FE, NM

87501

BILL TO CUSTOMER CONT-ART01

SHIP TO CUSTOMER CONT-ART01 A.P.O.: 09-0046

INVOICE NO. 104811	RVSN 9	DATE 6/28/84	PAGE 1
CUSTOMER ORDER *SEE BELOW	SALES ORDER NO. 11767	TAXABLE NO	
BILL OF LADING NO. 58130	DATE OF SHIPMENT 6/28/84		
SHIPPED VIA BAT TO FEDEX		F.O.B. FACT	PPD. XXX
S.A. 91			
TERMS 20% DUE 15 80% DUE 45			

ITEM	PRODUCT NUMBER	DESCRIPTION	TAX	QTY. SHIPPED	QTY. BK. ORD.	UNIT PRICE	EXTENSION	%
1	SUN2/120	SUN W/S PEDESTAL S/N: 4381		1	0	10140.000	10140.00	40.0
2	SUN2/120-OPT-01	S/W DIST 1/4" TAPE		1	0	.000	.00	40.0
3	SUN2/120-OPT-10	1MB EXP BRD		1	0	1980.000	1980.00	40.0
4	SUN2/120-OPT-29	COLOR ADD-ON 19" MONITOR S/N: 410083		1	0	4400.000	4400.00	40.0
5	SUN2/120-OPT-63	130MB DISK SUBSYSTEM S/N: 2075		1	0	9035.000	9035.00	40.0
6	SUN2/120-OPT-73	1/4" TAPE SUBSYSTEM		1	0	2600.000	2600.00	40.0
							28155.00	
							37.18	
	FREIGHT CHARGES						28192.18	
		DOCUMENTATION SHIPPED IN ADVANCE						

ORIGINAL

NATIONAL COMPUTER SYSTEMS



ON-SITE MAINTENANCE AGREEMENT
 National Computer Systems, Inc.
 P.O. Box 14527, Fremont, CA 94539

Place Actual Sticker here

VAR/VAD ID NUMBER _____

INSTRUCTIONS:

1. In the spaces below, fill in the model number, description and serial number for each Everex product covered by this service contract. The serial number of the computer system is located on the back of the computer and the serial number of any Everex enhancement board is located on the back of the board. (Example: AB 000000)
2. Before signing this agreement, carefully read its terms and conditions, printed on the back.
3. After agreeing upon the terms of the contract, please sign in the appropriate space below.
4. Place the white copy of the contract in the self addressed, postage paid envelope provided and mail it to the NCS Service Center. Keep the pink copy for your records.

IMPORTANT:

ON SITE SERVICE CANNOT BE ACTIVATED UNTIL THE N.C.S. SERVICE CENTER HAS RECEIVED THE WHITE COPY OF THIS CONTRACT.

IF ON-SITE SERVICE IS REQUIRED, PLEASE CALL OUR SERVICE CENTER

MODEL #	DESCRIPTION	SERIAL #
IS 286	8MHz Computer	EE 52334
EV-332	Hard / floppy drive Controller	VV 54768
ST 251	40MB Hard disk drive	MC-10856
EV-231-C	Monographics card	AQY-0006420
TEAC	1.2 MB floppy drive	3779945

THIS MAINTENANCE AGREEMENT IS SUBJECT TO THE TERMS AND CONDITIONS ON THE REVERSE SIDE. BY SIGNING BELOW YOU INDICATE YOUR AGREEMENT WITH THESE TERMS AND CONDITIONS.

 (Authorized Signature)

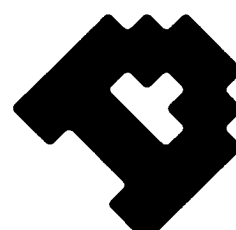
Company _____

Address _____ City _____ State _____ Zip _____

Phone () _____ Date _____

If throughout the term of this contract any Everex products are added to the computer system covered under this contract, please contact the N.C.S. ON-SITE SERVICE CENTER in order to have the additional products placed under coverage

Customer copy



D I G I T A L A R T S

I N V O I C E

Invoice #: 1207 (REF:DEMOPNT)

Reference P.O. #: verbal-W. Vasulka

Date: July 29, 1988

Bill to: The Vasulkas Inc.
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1	1	DGS Software: DGS 2.1 DGS CSM DGS FX DGS PAINT (VISTA)	\$ 9000.00
2	1	DGS Hardware: PC AT 80287 Math Coprocessor Vega Deluxe Card Multisync Monitor ATVista 4M DSI-780+/4 Data Tablet 19" RGB Monitor Animation Controller	<u>15500.00</u>

Sub-Total: \$24500.00

Shipping and Handling: 250.00

Total: \$24750.00

Less Deposit received • 15500.00

Total Now Due: 9250.00

Terms: Payable Upon Receipt

SHELDON LUBERMAN

7 3 7 0 - 0
 O P P O R T U N I T Y
 R O A D
 S A N D I E G O
 C A L I F O R N I A
 9 2 1 1 1 - 2 2 2 5
 (6 1 9) 5 4 1 2 0 5 5
 T E L E X
 6 5 0 3 0 5 0 0 3 5 M C I U W



CONFIDENTIAL INQUIRY CONCERNING FUNDING AMOUNT

PLEASE RETURN THIS FORM

PROGRAM: MEDIA ARTS

CATEGORY: Film/Video Production

APPLICANT NAME: Mr. Woody Vasulka

APPLICATION NUMBER: 88-001716

THIS INQUIRY is to advise you of the panel's preliminary recommendation for project funding and to determine if you could undertake the project at the reduced level of Endowment support.

The Panel's PRELIMINARY RECOMMENDATION is for the following amount: \$25,000

Your Project May Not Begin Before: July 1, 1988

PROJECT DESCRIPTION: Towards production of a videotape.

=====
This is only a preliminary recommendation to the National Council on the Arts and is still subject to review and approval by both the Council and the Chairman of the Agency. The panel's recommendation does not ensure or imply further favorable consideration; therefore, NO PUBLIC ANNOUNCEMENT OF THE PANEL'S RECOMMENDATION MAY BE MADE; NOR MAY YOU MAKE ANY COMMITMENTS, LEGAL OR OTHERWISE, WHICH ANTICIPATE THE EVENTUAL AWARD OF FUNDS.

If a grant is awarded, the reduced amount of Endowment support would necessitate one of the following: increase of other funding sources; reduction in costs; modification of the project you asked us to support; or a combination of the three. ~~However, the award from the Endowment cannot exceed 50% of the total project costs.~~

If you could undertake the project at the reduced level of Endowment funding as shown above, please revise the project budget information you submitted on your original application by calling me. ~~COMPLETING THE ATTACHED PROJECT BUDGET FORM.~~ The project description should remain substantially the same. If changes in project scope would become necessary, submit a revised project description in the space provided on the project budget form. IF THE AUTHORIZING OFFICIAL OR THE PROJECT DIRECTOR HAS CHANGED SINCE SUBMISSION OF YOUR APPLICATION, PLEASE SEND A LETTER TO THAT EFFECT ALONG WITH THE REVISED BUDGET INFORMATION.

If you are unable to undertake the project at all because the reduced level of Endowment support is simply not sufficient, please ADVISE US IMMEDIATELY so that these funds can be released for panel consideration in making other recommendations to the National Council on the Arts.

RETURN TWO COPIES OF THIS FORM AND TWO COPIES OF YOUR REVISED PROJECT BUDGET INFORMATION TO THE PROGRAM OFFICIAL SHOWN BELOW AT THE FOLLOWING ADDRESS: MEDIA ARTS PROGRAM, National Endowment for the Arts, 1100 Pennsylvania Ave., NW, Room 720, Washington, DC 20506, WITHIN THIRTY (30) DAYS OF THE DATE SHOWN BELOW. YOUR FAILURE TO SUBMIT THE REQUESTED INFORMATION IN THE ALLOTTED TIME COULD RESULT IN NO FURTHER ACTION ON YOUR APPLICATION.

=====
(For Endowment Use Only)

Cliff Whitham (202) 682-5452
(Program Specialist Name and Telephone Number)

5/3/88
(Date Sent to Applicant)

March 24, 1988
(Date of Panel Meeting)

(Date Received by Endowment)

Pls. see notes on reverse.

To Woody & Stana

PROPOSAL

to

The National Endowment for the Arts
Visual Arts Program

for

GRAPHICS ENGINE LABORATORY

from

Rising Sun Media Arts Center
P. O. Box 148
Santa Fe, New Mexico 87501

BACKGROUND

Over the last several months a task force of scientists and artists have been meeting for the purpose of creating a center to explore and implement a computer graphics system as an arts resource. This has been prompted by recent breakthroughs in hardware which, utilizing the VLSI chip in the computer, has created a new generation substantially lower in cost and higher in power than what has previously existed. The availability of vast amounts of public domain software, has also motivated us to act. We have proposed the development of a "transparent" and "user friendly" machine which will not intimidate visually oriented, non-technical artists. The objective is to bring to visual electronics a stage which has long been realized in audio electronics. Our machine will be called "The Graphics Engine". We feel that the time has come for artists to begin to play a decisive role in the development of computer graphics as a cultural resource. It is important that brilliant thinkers and visual artists who have a grasp of the pluralistic nature of twentieth century art begin to define and develop ways in which these powerful new tools can be utilized for making art, and to develop models for ways in which these tools can be made accessible to artists. We have a choice now which will determine whether one of the most far-reaching developments in human communication will enrich our culture as well as strengthen our industry and our military.

STATEMENT OF PURPOSE

The Rising Sun Media Arts Center (RSMAC) is creating a center equipped with advanced computer graphics hardware and software, employing a staff of scientific specialists, it will be called The Graphics Engine Laboratory (GEL). This infrastructure will provide a center where residencies will be available for working artists. It will be a think tank and research and development program which will create and house systems which will be "user friendly" to artists with demonstrated conceptual and aesthetic abilities, but not necessarily technical abilities. These artists will work with exceptional scientists, such as our advisory board (see resumes) to realize their own projects and as a result to further develop and shape the graphics engine program. There would be a resident scientist who would work with users to achieve their goals.

THE GRAPHICS ENGINE LABORATORY (GEL)

GEL would be a program as well as a system. It would carry out research and development of artist-computer interface. It will provide flexible and real-time creation and manipulation of graphic images and information. It would take existing images from other media (film, video, photography, etc.) transferring them into computer interpretable language by conversion into bits, manipulating the images and transferring them back out again into another hard medium (tape, film, paper). It will also originate images directly in a number of ways.

In achieving a "user friendly" system for artists we must take advantage of the two "systems" in play. The first, the human mind is pattern recognition oriented, uses fuzzy set operations and associative thinking. The computer has poor pattern recognition capabilities, is linear, but is very fast at repetitive tasks. As we proceed away from the way a computer operates, we can disguise its innerworkings through the use of higher level languages which somewhat resemble human language and can express very complex procedures in a very precise manner. Such languages can be arranged in a hierarchy so that the instructions to the computer become more and more general. One eliminates or reduces the laborious coding of instructions to the computer, with the use of analog input, i.e. light pen, joy sticks, "mice",

touch sensitive screens, as well as, in program design. This can relieve the artist from having to know how the computer executes its operations. The use of such systems would require manageable technical training, well within the grasp of most artists. Such a system is "user friendly", which is our goal for GEL.

SOFTWARE

The GEL would require an elaborate, heirarchical software system with levels of generality ending in analog input commands and special purpose keys. The operating system could be analogous to UNIX for handling files. Pieces of a software system have already been written and are available as public domain. Such programs include, numerous variations on line, surface, 3 dimensions, perspective, shadowing, transparency, translucency, rotation, translation, coloring, edging, illumination and motion. The Graphics Engine Lab will implement such software in a highly interactive way. We already have software which has been donated to our program valued at a conservative \$34,000.

HARDWARE

The implementation of such a set of algorithms normally requires an immense computing power of the order of a Cray 1. We would do it with a Motorola 68000 Based machine, with arithmetic co-processors and front-end processors which for special tasks can execute at speeds of a Cray. These special purpose boards can be built relatively cheaply (\$2,000). These front-end processors can be built by the staff in Phase I and II to upgrade the LSI-11 which we now own to a 68000 based computer running UNIX. We also have hard disc drives and floppy disc drives. Additional hardware desired for Phase II of our program include: frame digitizer 1 M byte resolution; disc storage of 1/2 gigabyte; multiple arithmetic co-processors running in parallel, a spin-off of an advanced LANL computer science project available in one year with SLAC superfast bus.; high resolution color monitors; array processor; interactive graphic input devices, light pens, data tablets, etc.; graphics output devices, film recorder, video recorder.

Such a system can be bought for about \$100,000 to \$150,000. We plan to build some of the components. We feel optimistic that industry will assist us through donations of hardware and software.

LIBRARY

The program would assemble a large library of imagery from film and video archives which would be computer catalogued. Similar access to other archives would be sought. A substantial library of computer software will be assembled through gifts and through the public domain which is staggering in scope.

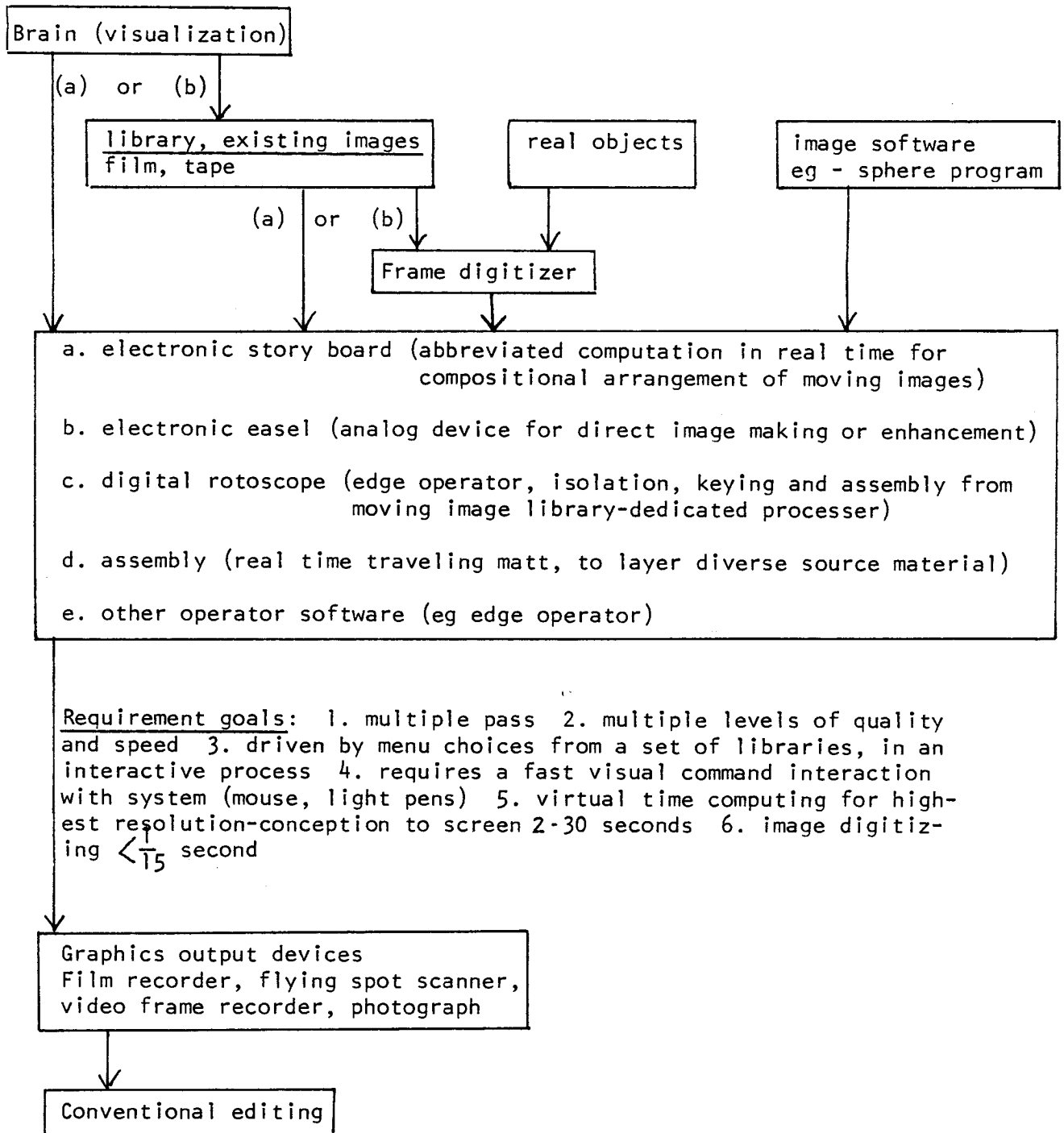
USERS

It should be noted that the uses for our program are not fully known. We are setting out to determine the ways this system will be used. Some areas contemplated are:

1. Static graphics which may result in photography, painting, weaving.
2. Sculpture - a very powerful method to visualize three dimensional objects in many views, determine volumes, structural analysis, harmonies, site aesthetics, etc.
3. Motion graphics - computer animation, enhancement or manipulation of video or film imagery, compositional strategies, etc.

4. Experimentation - the research and development of new uses which have not been conceived.
5. Design - visualization, engineering, ergonometics, statistical analysis, etc.
6. Architecture - similar to design.
7. Pure science - for private, personal, experimental projects.

SYSTEMS DIAGRAM:



STAGES OF THE PROGRAM

I. Phase I: One year will be allocated for a planning and development phase. During this period the following will be achieved:

1. Hire a Development Director. The job would be to:
 - a. Refine the requirements of the program.
 - b. Acquire the necessary hardware to create a working system.
 - c. Acquire public domain software and convert it to "C" language if necessary USING ALREADY DONATED LSI 11 computer.
 - d. Carry out a pilot artist in residence program to explore the needs of such a program.

PHASE I ESTIMATED BUDGET

Development Director	\$20,000
Director RSMAC \$20,000 @ 25%	5,000
Administrative Assistant \$12,000 @ 20%	2,400
Travel	1,600
Allocated overhead--office, utilities, phone	2,000
Pilot artist-in-residence program	3,000
Technical backup--cost of instruments, tools cables and misc. (est)	1,000
	<hr/>
TOTAL	\$35,000
Equipment and software raised by RSMAC	\$35,000
	<hr/>
TOTAL COST OF PHASE I	\$70,000

note:

*Phase I work has been raised
by NEA to 50,000*

*& a joint venture with
the NSF proposed
for Phase II.*

PHASE II

In the beginning of Phase II we would create the working details and implementation for:

1. Artist-in-Residence Program
 - a. Fellowships (and support system for fellowships, including funding and housing.)
 - b. Public Relations/Promotional Program.
 - c. Affiliations (establish university or other institutional alliances.)
2. Refinements to Graphics Engine
 - a. Develop real time manipulation with simplified language.
 - b. Continue equipment acquisition.
 - c. Continue software acquisition.
3. Development earned income program
 - a. Software marketing.
 - b. Special effects production.
 - c. Use by non-artists.
 - d. Electronic arts curriculum development.
4. Produce in-house promotional tape for presentation to industry or foundations.

COST OF PHASE II (estimated)

Development Director	\$ 25,000
Director RSMAC \$25,000 @ 15%	2,750
Administrative Assistant	5,000
Technical Director	18,000
Allocated overhead--studio, office, utilities, phone, etc.	6,000
Technical back-up--tools, repair, circuit boards, chips, rocks, etc.	3,000
Equipment and software	170,000
Artist-in-Residence program	
Transportation	4,000
Stipends	4,000
Housing	6,000
Promotion/Publicity	4,000
Transportation	4,000
Other	12,000

TOTAL COST OF PHASE II \$252,950

MATCH - RSMAC

Equipment and software raised by RSMAC	\$170,000
Corporate/private sector cash raised by RSMAC	32,950
NEA (proposed)	50,000

TOTAL \$252,950

PHASE III

Would be similar to Phase II except for implementation of electronic arts curriculum. Estimated school budget first year \$70,000. Earned income and contributed income for school also \$70,000. (school budget only)

SUPPORT FROM NEA

We are proposing that The National Endowment for the Arts through a special grant with the visual arts program fund Phase I as outlined above in the amount of \$35,000 which would be matched at least 1:1 with hardware and software by Rising Sun Media Arts Center and the Graphics Engine Program. This application is made with the understanding that the Graphics Engine Program would eventually become its own organization and that RSMAC is acting as an umbrella organization until such time that it can achieve its own non-profit status as determined by the advisory board. The advisory board is: Robert Gaylor, Chairman; Gene Youngblood; Brosl Hasslacher; Doyne Farmer; James Crutchfield; Griffith Hamlin; Woody Vasulka. Resumes are attached.

50,000

Digital Arts
7370-Q Opportunity Rd
San Diego, Ca 92111-2225

Santa Fe, 14-Jun-88

Sheldon L. Liebman

Dear Sheldon,

Here is a check (\$ 15,500.00) for the hardware part, let me know how you are going to ship it.

A couple of questions:

A good friend of mine advised me to see if I could get the newer VEGA DE LUXE by VIDEO 7 Display Adaptor plus Multi-Sync Monitor instead of the CBA card and monitor, and secondly, for my own good, if there is a change to get a 19" monitor instead of the 13" - my eyes are getting old, you know...

Please let me know if that is possible, I may have a way to substitute the RGB monitor from a local source, or else we proceed as agreed in the letter of June 2nd. In any case, please call me to iron this out.

My NEA grant money should theoretically be here by mid-July, but it is the government, so we better say the balance (\$ 9,000) should be there by August 15th for sure. I hope this is agreeable with you and Bruce.

I presume, the hardware comes with a complete documentation, and I would like to get the software manuals as soon as possible to be able to study your tricks...

Again, I am very pleased with your generosity, and hope to contribute to the cause of the digital arts and its esoteric implements.

Please make the bill to our little non-prof. called "The Vasulkas, INC.", if it helps, we are tax deductible.....

Your Woody

The Vasulkas, Inc.
Rt. 6, Box 100
Santa Fe,
New Mexico, 87501

Tel: 505-473-1614
505-471-7181

DEAR TERRY

THIS IS HOW THE #^{PS} STAND TODAY:

~~I AM IN NEGOTIATION W/~~

IN MY NEGOTIATION WITH SHELLY
A PACKAGE HAS EMERGED IN THIS
CONFIGURATION:

1- DEFINICON } \$ 5700
1- TANGA 24 }

+ DGS-3+(BLOCK) \$ 4300

TOTAL \$ 10000

I WOULD LOVE YOU TO DO ~~BETTER~~
AS GOOD OR BETTER SINCE YOUR
~~BETTER~~ ~~ENCODER~~ ~~DOES~~ TANGA

IS 32 BITS AND YOU HAVE SOME
GROWTH AS ^{THE} ENCODER VI and
MORE.