SCIENCE MUSEUM
South Kensington London SW7 2DD

Telex 21200 Telephone 01-589 3456 ext 500

Dr Gwen Bell

The Computer Museum
One Iron Way
Malboro
MA 01752
USA

Your reference

Our reference

Date 8.6.83

Dear Gwen

Just a quick note to say that I have put the case to the Museum Director. She wants me to consult my 'Keeper' (!) who is away on vacation till Monday 13 June. I am a little more optimistic after seeing her reaction - she is boss after all. I will let you know as soon as they decide.

'The Computer Image' theme still feels good to me and I am thinking about it when I can. Harriet Zoe and I attended Harold Cohen's opening party at the Tate - I think Zoe paid more attention to one large, beautifully colö(u)red wall-to-wall mural (though it was on some fabric and wasn't a mural it looked as if it might have been) than anybody else. She was quite absorbed by it. I have a better feel for AARON now that I've seen it while drawing.

The Science Museum is in frenetic chaos - National Museum of Photography, Film and Television is inaugurated next week. This involves me quite a bit, even though 'Seeing the Invisible' does not open till 21 July.

Meredith will get her information soon.

I enjoyed my visit immensely and look forward to returning in October and January.

I hope you have made progress with the design question. Greetings to you all.

Yours,

Oliver

SCIENCE MUSEUM
South Kensington London SW7 2DD

Telex 21200 Telephone 01-589 3456 ext 500

Gwen Bell
The Computer Museum
One Iron Way
Malboro
MA 01752
USA

Your reference

Our reference

Date 29.6.83

Dear Gwen

I enclose my first thoughts on a gallery devoted to the computer image.

I've been thinking that the museum might appear a little lop-sided with the time-line (with SAGE), four generations and the computer image. Partly to meet this criticism, I would like to use the 'photogenic' bait of imaging to allow some of the ideas of programming to be slipped in. But I also feel that it is the museum's business to try to reveal the process going on rather than simply display amazing results. To some extent, how much this can be done will depend on resources - human and financial. Revelation of process means specially produced programs (although some may well exist) and this takes planning and programmers. It would be good to get some such projects started when I come at the end of October.

In any case, I look forward to hearing the reaction to this outline, and indeed whether you are happy to proceed with the general theme. I would have liked to have done more on it but Bradford is still gathering speed.

On the question of salary, I am well aware that there are factors concerning your museum's resources, comparability (with industry, universities or other museums) and my suitability to take into account. But from our financial 'need' point of view, bearing in mind that the arrangement is for one year, we have to think about:

1. Harriet's employment- both in the US and back in the UK on return
2. Daytime child care,accomodation and health care which cost us little here but will be substantial in the US (we'd prefer not to let our house to a complete stranger for a commercial rate)
3. To stay in the civil service pension scheme (normally paid by the government) the UK Department of Education and Science will require payment of 20% of my present salary and there will also be national insurance contributions (about £900 now) to pay
4. We would like to have a bit more disposable income in the US than we do in the UK as the average is higher.

cont.

cont.

It was good to hear on the telephone that your support is gaining momentum. Thinking about the two-tier idea, I was wondering whether the general public might feel put off if they knew that they could see less than members. It may just be slightly alienating. Such a system could never be contemplated in our Museum here- somewhat different I know. It was just a thought- I suppose there is no reason for the general public to know what they are missing.

I hope all is well with you all and look forward to speaking on the 7th.

Yours

Rediffusion 817-640-5000 Rich Oyler in PR Spoke 14/5/88 and to Fed Ex

E + S 801-582-5847

D Van Dunlop

May 11 1984

Glenn Hillin
Rediffusion Simulations
2200 Arlington Downs
Arlington
TX 76011

Dear Mr Hillin

Further to our recent telephone conversation, I am writing to ask whether you might be able to send us some video material of flight simulators in action.

The material would be used as part of a major new exhibit entitled The Computer and the Image. I enclose an outline for this exhibit as well as the latest issue of The Computer Museum Report to give you some background. If possible, we would like to attempt to explain something about how the images were created. Can you send us some technical material as well for this purpose? does the film have an explanatory voice over?

Thank you for your help. I look forward to hearing from you.

Yours sincerely

Dr Oliver Strimpel
Curator

enclosures

28 June 1984

Bob Gerard
Thayer School of Engineering
Dartmouth College
Hanover
NH 03755

Dear Mr Gerard

Further to our telephone conversation, I am sending you some information on The Computer Museum. Enclosed are the latest issue of The Computer Museum Report, a reprint from Discover magazine on the displays at our former site in Malboro, our capital campaign brochure which contains a description of our current projects and an outline of the exhibit The Computer and the Image.

The Computer and the Image will be a 4000 square foot permanent exhibit which will attempt to portray the capabilities of computer graphics and image processing. Interactive exhibits make the largest impact on the visitor and we have secured the donation of a considerable amount of equipment to run demonstrations.

Recently Lexidata have offered us a Lex 90 system with Solidview. We have a VAX 11/750 under VMS to act as host. We are interested in the possibility of running a version of the program you are developing for designing houses. We envisage demonstrating a subset of your system, allowing visitors to construct a simple house and then view it from a number of directions. Control over the light source would be exciting too.

A parallel slot on the VAX is available and we could accomodate your program as indicated on the phone : 1.5 MB on the disc and 1/4 MB of RAM. We would also need to know what software you require on the system and whether the construction of the Museum's human interface would require programming by the Museum. I shall contact you in early August to see where things stand. As our public opening date is November 14 1984 we would need to have a completed and debugged version here by November 2 at the latest. It would be valuable to test a version earlier to make sure that the processing load on the VAX is consistent with a rapid response time.

Thank you for your interest.

Yours sincerely

Dr Oliver Strimpel, Curator

enclosures: Report, reprint, brochure, outline

THAYER SCHOOL OF ENGINEERING
DARTMOUTH COLLEGE • HANOVER • NEW HAMPSHIRE 03755
603 - 646 2200

October 30, 1984

Oliver Strimpel
The Computer Museum
300 Congress Street
Boston, MA 02210

Dear Oliver:

Enclosed is a description of the architectural program which we will be sending to you. It is a bit longer than you requested. You are free to edit it as long as the credits are left intact.

As soon as I have some written permission from BYU, I will send you a tape with the program.

Sincerely,

Robert B. Jerard

Robert B. Jerard
Assistant Professor
of Engineering

RECEIVED NOV 0 2 1984

RBJ/da
Enclosures

In addition to informations I gave you over the phone I have included an NEH Brochure.

COMPUTER AIDED DESIGN OF ENERGY EFFICIENT HOMES

Computer Graphics offers exciting possibilities for architectural design. Building design starts with a two-dimensional floor plan lay-out. This layout is then transformed into a three dimensional computer model of the house. Viewing transformations allow the designer to "see" the model from any distance and direction. Customer and architect can work together in greater harmony. The visualization of ideas is greatly enhanced. Working construction drawings are finished sooner, with greater accuracy. A large library of designs allow prospective customers to electronicly "browse" through a series of designs.

This exhibit is an interactive house display program - part of a complete computer aided house design system being developed by Northern Energy Homes (NEH). NEH homes are very energy efficient because they have a complete, uninterrupted shell of 8" thick poly-styrene insulated panels fastened outside a post and beam frame. Nearly all parts are standardized to keep costs down, yet they can be combined as building-blocks in different ways to create any number of custom house designs. The houses you see here took about 3 hours each to "build" using the floor plan layout program, another part of NEH's CAD system.

The program is running on a Digital Equipment VAX 11/750 computer. The color terminal is a LEX-90 solidview by Lexidata. Much of the hidden surface removal and shading is done by the terminal which allows the program to draw houses many times faster than more traditional methods.

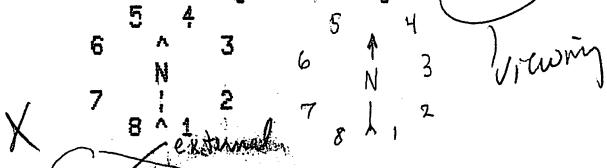
The software was developed at:

> Dartmouth College's Thayer School of Engineering by Mark J. Franklin as part of a Master's Thesis performed under the direction of Prof. Robert B. Jerard. The project was funded by Northern Energy Homes of Norwich, Vermont. The display software uses the "Movie.BYU" program developed by Hank Christiansen and others of Brigham Young University.

1

House program options - type in the number of what
you want to do and hit the 'enter' key

NUMBERS 1 THROUGH 8 SPECIFY THE CARDINAL DIRECTION AS FOLLOWS:



ELEVATION:
9 - worm's eye view
10 - bird's eye view
11 - close to house
12 - in house

HOUSE TYPE:
13 - build a saltbox
14 - build a cape and a half
15 - build a contemporary

WHAT TO SHOW:
16 - show frame only
17 - cut house apart
18 - change the color of the house

What is your choice?

This reads:
Numbers 1 through 8
specify the CARDINAL
DIRECTION as follows:

(I had printer
problems - sorry)

LEXIDATA

Ctrl

Disconnect;

Right hand pad

Computer Aided Design of Energy Efficient Homes

Computer graphics offers exciting possibilities for architectural design. Building design starts with a 2-D floor plan layout. This layout is then transformed into a 3D computer model of the house. ~~Viewing transformation~~ allow the designer can then "see" the model from any distance and direction.

One person. Customer and architect can work together in greater harmony. The communication of ideas is greatly enhanced. Working

construction drawings are finished sooner w greatly accuracy.

A large library of designs allow prospective customers to "browse" through a series of designs.

This exhibit is an interactive house display program - part of a complete CAD'ed house design system being developed by Northern Energy Homes (NEH). NEH Homes are very energy efficient because they have a complete, uninterrupted shell of 8" thick polystyrene ~~insulated~~ insulated panels.

fastened outside a post and beam frame. Nearly all parts are standardised to keep costs down, yet they can be combined as building blocks in different ways to create any number of custom house designs. The houses you see here took about 3hrs ea to "build" using a floor plan ~~to~~ layout program, another part of NEM's CAD system.

The program is running on a DEC VAX 11/780 Color Terminal is Lexidata 90 Solidview by Lexidata: much of hidden surface removal & shading is done by the terminal

which allows the program to draw

many many times faster than more hand method.

Software developed at Dartmouth College, Thayer

School of Engineering by

Mark J Franklin as part of a Master's thesis

under Robert B Jerard

supervision

project funded by North E H of

Norwich, VT

Display software was "Movie.BYU"

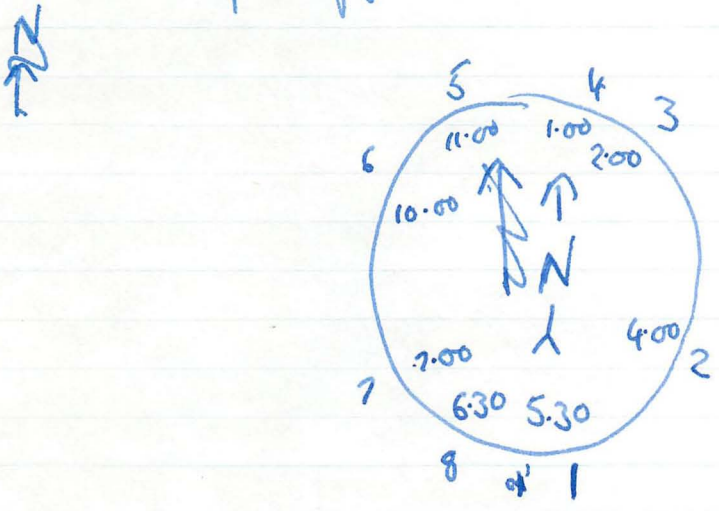
program developed by Hank Christiansen

and others of Brigham Young University.

House program options

Type in the number and hit the ~~enter~~ ENTER key

1-8 specify the viewing direction



~~Eye Elevation~~

9 - Worms-eye view

10 - Bird's-eye view but outside

11 - ~~Close to house~~ ~~More close~~ Close to house

12 - Inside the house

House type : (Many on back note a Q on ground.

13 Build a salt box

14 Build a ~~A~~ cape

15 Build a contemporary

20 seconds to plot a house

[2000 polygons continuous shaded (not smooth-shaded) 1 light source at the eye]

What to Show:

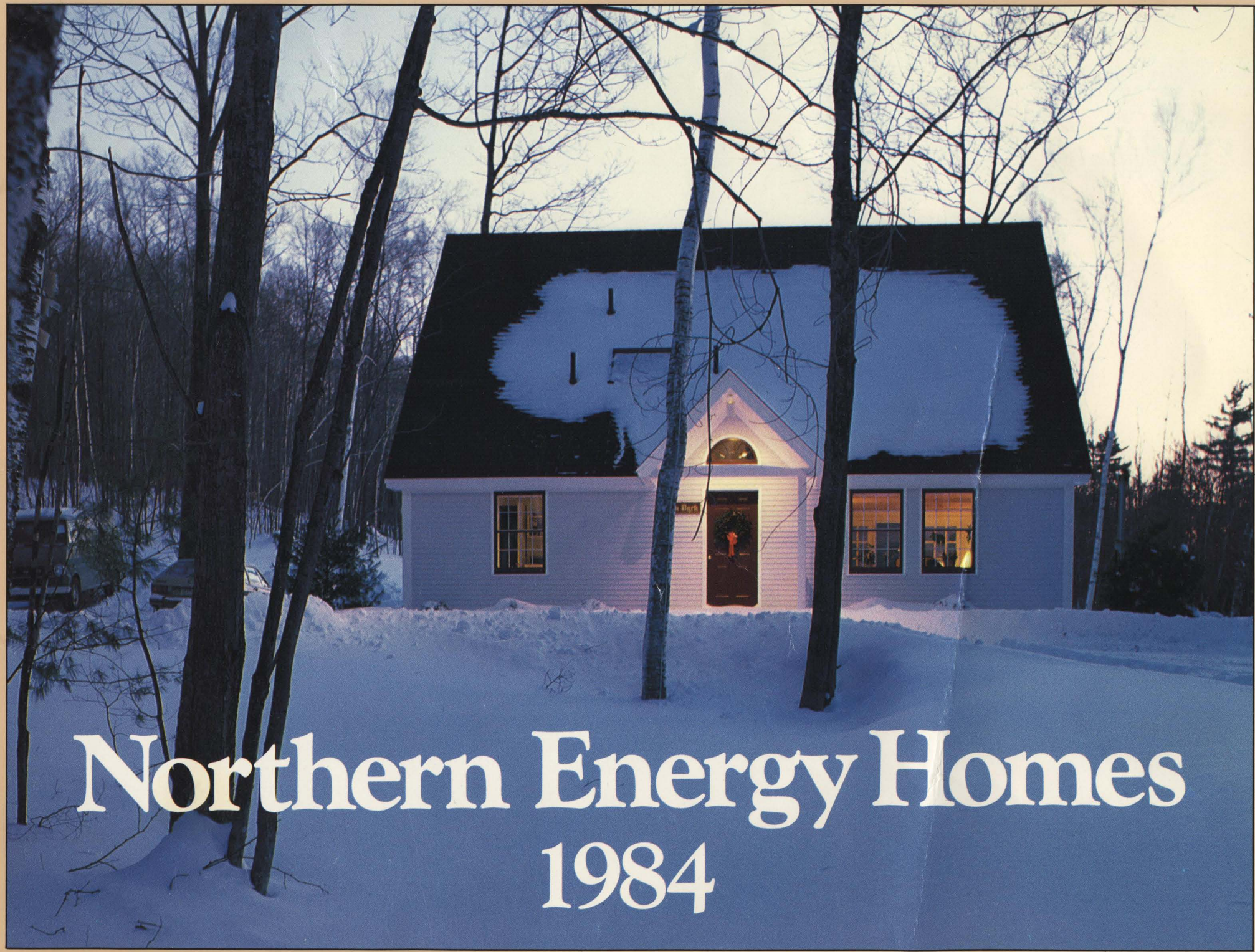
16 Show the frame only

17 Cut the house apart

18 Change the house color

Monochrome

(Also Slides live ~~of~~ on Monitor)



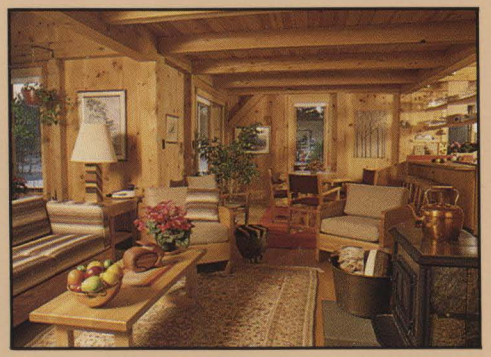
Northern Energy Homes
1984

The basic concept of every Northern Energy Home is the marriage of post and beam framing to R38 insulating panels. We incorporate the time-proven strength and rugged beauty of heavy timber construction with the safest, most efficient and stable insulating material on the market today.

While our insulating technique creates an R-value of 38, there is no way to measure the warm and comfortable feeling created when solid wood is a part of your living environment. Because of its durability and this aesthetic quality, post and beam construction has been used for hundreds of years. Even the panel, though modern, is not new. Similar panels have been used in commercial applications and environmentally controlled buildings for more than twenty-five years under far more rigorous conditions than you would ever experience in a home. The panel system is what sets Northern Energy Homes ahead of other super-insulated types of construction. Each panel of polystyrene is eight inches thick. This core is pressure laminated to an interior surface—either solid tongue and groove pine or sheathing to support sheetrock or plaster. On the exterior is a half-inch sub-panel covered by your choice of siding.

There is no interruption in the insulation by framing or wiring. Infiltration is virtually eliminated. Windows and doors are foam sealed directly into the panels during manufacturing. Windows include an R10 integrated shade system to significantly cut heat loss. Corners and eaves are joined with a special spline system to make our R38 value consistent throughout the home, out-performing other manufacturers who may claim higher R-values in some areas. This super-insulated sandwich produces extremely low heating requirements. A small ground water heat pump provides heat, hot water, and cooling for what you might expect to pay for electric hot water in any other home. A fresh air heat exchanger eliminates any concerns about stuffy air and completes the system. Northern Energy Homes require very few lifestyle compromises to attain energy efficiency. No furnace. No electric baseboard. No woodpile. No complex air flows. No passive or active solar systems. All at a constant temperature year round.

No matter how you decide to design and decorate it, your Northern Energy Home is practical, dependable, and tough. There is nothing frivolous about 8x12 inch carrying beams. The frame is pre-cut and notched to assure proper construction. Vertical posts have a routed groove on the back to allow for electrical wiring. Advanced methods of timber joining control stresses and twisting.



Our insulation material is safe and simple. Polystyrene does not shrink or emit fumes. Its impermeability to water and the absence of air space in the panels avoids moisture condensation problems. It does not lose its R-value. Panel design meets residential fire codes. If exposed to intense fire it will burn, but gives off basically the same combustion by-products as wood.

Northern Energy Homes are reasonably priced. Our framing and panel system make this possible—post and beam construction is simple and efficient; there is no complicated framing, extensive layering of material, or fragile vapor barrier. While other super-insulated home concepts may require many extra costly man-hours to build, the simplicity of our system should save you money.

The ability to create your own home extends beyond the design of the exterior style and shape. Inside, many possibilities exist to suit your lifestyle. The post and beam/panel insulating system eliminates worries about drafts and cold corners. Cathedral ceilings are possible without temperature stratification; solariums add warmth; and extra window area will increase light without seriously sacrificing efficiency.

Every Northern Energy Home is custom designed. You are not required to work within the confines of pre-designed models. The Northern Energy design team works with you to achieve your living environment goals. For example, many owners choose to leave the rich-looking beams and wood panels exposed. However, sheetrock or plaster may be used to create a room, a wall or a whole interior with a painted or wallpaper accent. And although they are not included in our basic package, french doors, skylights, and fireplaces (or combination woodstoves) are incorporated into many buyer's plans, for purely aesthetic reasons.

The choice is yours. Bring your imagination to us and we'll help you create a home that is beautiful to look at, practical and comfortable to live in, and nearly energy independent—all with a minimum of life style compromises.

To learn more about Northern Energy Homes—we need to hear from you. A call will be fine. Or, if you prefer, sit down and write us about some of the things you are looking for in a home. We'd welcome the opportunity to talk and meet with you.

NORTHERN ENERGY HOMES, INC.

BOX 463 • NORWICH, VERMONT 05055 • (802) 649-1284

© 1984 Northern Energy Homes

Patented

Furniture courtesy of Pompanoosuc Mills.

The
Computer
Museum

300 Congress Street
Boston, MA 02210
(617) 426-2800

8 August 1984

Art Durinski
Omnibus Computer Graphics
c/o Information International
5933 Slauson Avenue
Culver City
CA 90230

Dear Mr Durinski

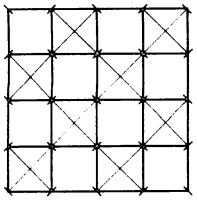
Further to our recent telephone conversation I am writing to seek Omnibus's participation in our major exhibition The Computer and the Image opening at The Computer Museum this fall. I enclose an outline of the exhibit as well as the latest issue of The computer Museum Report to give you some background.

We would like to make a comprehensive collection of images synthesised by computer that used the teapot dataset originally from Martin Newell. I have already contacted Rob Cook at Lucasfilm and Jim Blinn for their versions, but there are several tabletop scenes that I know of that were made by Gary Demos at Information International. I would be most grateful if you could send us a complete set of images in which the teapot appears in any form. Slides would be best as we can then make prints to the required size in a single step but prints (large) would be fine as well.

We are also showing selected computer generated films on topics such as education, advertising, simulation and visualisation. We would be glad to consider including some Omnibus material if you can send us some material to review. We plan to use 3/4" U-Matic video tape. Still images of Omnibus's recent work would also be of interest, especially if they apply some novel technique or cover an unusual subject matter. In all cases we would like to have some brief descriptions of the hardware and software used to make the images as well as dates. Please indicate the wording of the credit.

Although the public opening date is November 14, we need to have the material in hand by the end of August or very early in September. Thank you for your interest - I look forward to your parrticipation.

Yours sincerely



Dr Oliver Strimpel

The
Computer
Museum

300 Congress Street
Boston, MA 02210
(617) 426-2800

August 30 1984

Don Delson
Caltech MC 1-70
Pasadena
CA 91125

Dear Mr Delson

Further to our telephone conversation, I am writing to request permission to use computer-generated excerpts from The Mechanical Universe as part of a major exhibit The Computer and the Image being developed now by the Museum. I enclose an outline for the gallery to give you an impression of its scope as well as the latest issue of The Computer Museum Report.

We are planning a section on computer graphics in education and would like to include The Mechanical Universe along with a Plato terminal, a Logo machine, and Seasons, developed by Children's Television Workshop. We would of course show appropriate credits either on the film or on an adjacent panel. Although there will be a charge to gain admission to the Museum, there will be no further charge within the Museum for any specific exhibit. The film would be running continuously or on demand depending on the number of visitors.

We would like some technical information about how the imagery was produced - both the software and the hardware - to put in an explanatory caption.

The public opening date is November 14 1984 but we would like to have the video material in hand by the first week in September if possible. We shall be using 3/4" U-Matic video tape players.

Thank you for your interest and, we hope, Caltech's participation.

Yours sincerely

Oliver Strimpel

Dr Oliver Strimpel
Curator

enclosures

BIO-IMAGING RESEARCH, INC.
425 Barclay Boulevard
Lincolnshire, Illinois 60069
(312) 634-6425
Facsimile (312) 634-6440

September 7, 1984

Mr. Oliver Strimpel
The Computer Museum
300 Congress Street
Boston, MA 02210

Dear Mr. Strimpel:

Enclosed is a photograph of four numerical projections of a reconstruction of a dog's heart with x-ray contrast material in the coronary arteries. The volume reconstruction is made up of a stack of 96 thin tomographic (CT) images of the heart. The four panels show four "views" of the volume generated by the method of numerical projection. This photograph first appeared as Figure 4 in the article entitled: "Display and Visulaization of Three-Dimensional Reconstructed Anatomic Morphology: Experience with the Thorax, Heart and Coronary Vasculature of Dogs", by L.D. Harris, R.A. Robb, T.S. Yuen, and E.L. Ritman, Journal of Computer Assisted Tomography 3: 439-446, 1979. Permission should probably be sought from the journal.

I have also enclosed a video tape in u-matic 3/4 inch format showing a movie sequence of the rotating heart. I request that you copy and return the video tape.

Finally, the Mayo Foundation expects that the Mayo's name will not be used in a promotional fashion. Any credit to me should read: Lowell D. Harris, Ph.D. at Bio-Imaging Research, Inc. at the address listed on this letterhead.

I hope the images will be of use to you.

Sincerely,

Lowell D. Harris

Lowell D. Harris, Ph.D.
Director of Systems Display

rlm/LDH-6

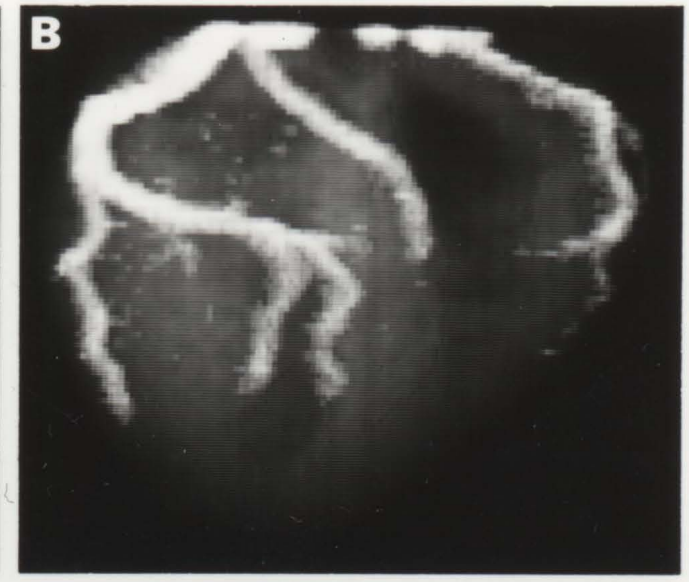
Enclosures

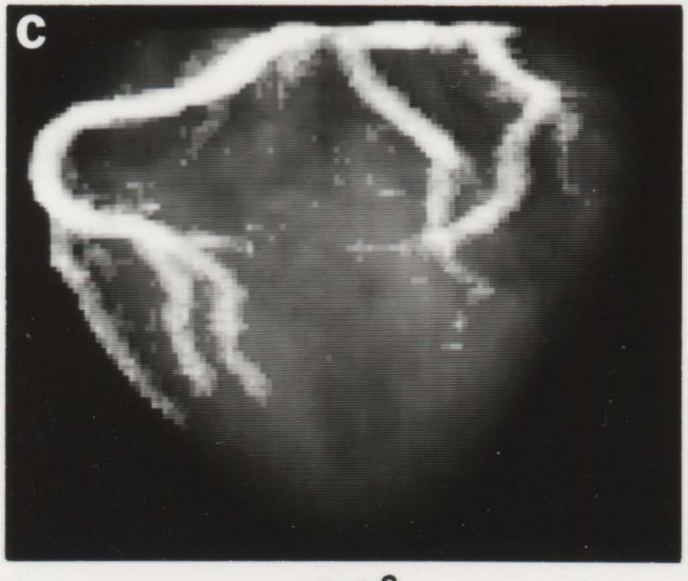
MATHEMATICAL ROTATION OF RECONSTRUCTED VOLUME

(Isolated Canine Heart with 83% Dissolution of Myocardium before Reprojection)

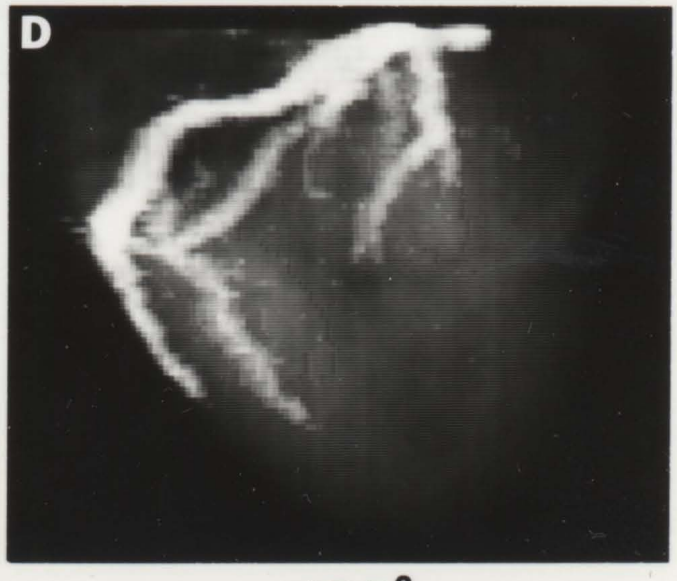
Angle of Rotation: 0°

45°





90°



135°