

The
Computer
Museum

computer museum

memorandum

One Iron Way
Marlboro
Massachusetts
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TO: Brian Randell, Chairman
Harvey Cragon
George Michael
Ken Olsen
Jean Sammet

FROM: Gwen Bell
DATE: 7/13/83

*Get you had
forgot about this
role. You better call your
love, Jamie, soon -
she flies the coop
Sept. 9.*

JUL 18 1983

Dear Members of the Collections and Exhibitions Committee,

In planning for the move to Boston, Brian Randell has agreed to activate this committee to review the plans for the exhibitions.

Two major exhibits are planned for opening in 1984: The History of Computing and The Computer Image.

At present, The History of Computing exhibit is being supervised by myself with Beth Parkhurst, Meredith Stelling, and Gregory Welch undertaking the research. What has happened to Jamie Parker? She is getting married and moving to Geneva, Switzerland. I am looking for a quality replacement with great haste. In addition, we have found an exhibit builder: Skip King. Skip was one of the RESISTORS (Radically Emphatic Students Interested in Science, Techology and Other Research Studies) and has been hacking since age 11 in the mid sixties. He's the first museum exhibit designer that I have met who I don't have to introduce to the computer culture. We will have materials on this exhibit to send to you October 1, and have the great benefit of Brian Randell able to spend Thursday October 13th at the Museum going over this exhibition. Your participation in person or by comments in the mail is requested.

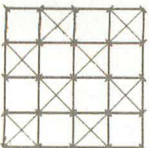
Oliver Strimpel, who is presently in charge of the computing exhibition at London's Science Museum, has been given a leave of absence for 1984, to curate "The Computer Image" exhibition. His preliminary proposal is attached. Please send any reactions to this that you have to me. The time table for this exhibit is such that the Exhibitions and Collections Committee could set up a meeting on Thursday or Saturday, May 10th or 12th, to review the contents of this exhibit.

From my point of view, this committee can make major contributions in an oversight role on the development of exhibitions at the Museum. This is really the heart of the matter, and should be interesting and fun.

In addition to your overview, I have assembled a small committee of experts to review the progress. These include Sheila Grinnell, who has master-minded an exhibit entitled "Chips and Changes" that was funded by the National Endowment for the Humanities and a number of companies and will open in March 1984, Bruce McIntosh (a Boston exhibit designer), and Paul Tractman, of the Smithsonian.

Our goal is to be more sensitive to the requirements of serving a more general audience while remaining faithful to pursuing the goal of collecting and exhibiting the history of information processing.

I look forward to hearing from you.



Outline Proposal for a Gallery

THE COMPUTER IMAGE

At The Computer Museum
Boston

Oliver Strimpel
29.6.83

Notes

1. The story line is not gallery text but the gist of the message.
2. The material column is not complete but aims to give some idea of how one might get ideas over, where the 3D objects are likely to be and how many 'specials' in software or hardware might be needed.
3. The 'Images' section might well be integrated into appropriate places within the remaining sections. The entire proposal should be regarded as fluid, or as an invitation for criticism. Perhaps the art section does not fit in. Perhaps the historical part should also be integrated into the rest or become larger.
4. Design points: Interactive items should have space for people to watch each other

An art section might need setting apart

Windows are useful sources of raw images
5. Working exhibits require large resources to develop and maintain compared to static ones. They tend to be very popular. How many such items can be developed depends on the museum's resources as well as, of course, how many are deemed desirable. The number of 3D objects depends on how much collecting can be done as well as on what would be relevant.
6. In general exhibits should appeal on several levels- the expert should not feel that information is sparse, the superficially interested person should not be put off by dry text blocks. Most items listed here could be presented in this way. The appeal of the displays will be known to people who have been to computer graphics conferences and shows. But there should be a coherent point of view (slant?) throughout the gallery.

Section	Story Line	Material
beginnings	When computers reached a certain size and power, images could be made. Link up with 4 generations story and give feel for 1950's context.	films - TX-0 sketchpad objects : PDP 1 and spacewar pioneering efforts first vector tube? E & S prototypes?
images	An image is an illusion. Its 'realism' depends on spatial, contrast and colour resolution. (not talking about art here)	large dissected image user-controlled pixellation of Mona Lisa? vector version?
displaying an image	To display an image electrons and phosphors, light and film, and ink and paper are used.	exposed CRT and vector machines and plotters running interactive programs in which user makes each plot images via intermediate stage showing the process holograms?
storing an image	A picture is much more than a thousand words. But it <u>is</u> made of 'words'. Tape, video disk, RAM are convenient for computers to read. (the image is for the human eye)	model of section of video disk - put finger into pi model of tape FeO element model of part of RAM? each next to real thing get feel for storing property.
inputting an image	Input of an image needs conversion to suit the machine and a convenient interface. Lines input by touch, pressure, pens. Machine vision will depend on television cameras	touch-sensitive screen tablet mouse digitiser TV camera all interactive, via program which reveals process whereby information gets in.

Section	Story Line	Material
images cont.		
movement	A sequence of similar images creates the cinematographic illusion. It takes time to generate images so they are strung together by time-lapse photography.	interactive control over frame rate simple animation
manipulating an image		
enhancing contrast colour deblurr HSI filter separation	Images, photographic or electronically produced can be altered to reveal structure not otherwise visible. Usually it is known what is 'wrong' with the picture. It takes number-crunching to correct it.	interactive control of TV image of downtown Boston out the window: first alter contrast, colour, filter in abstract and then apply to image maybe best on video tape
creating effects	Once inside a computer, images can be transformed to suit our fantasy.	non-interactive before/after: Landsat astronomical multilayer paintings forensic manuscripts video tape or interactive manipulation of view out of window showing geometric distortions, scene spinning ...

Section	Story Line	Material
synthesising an image from scratch	To see things that never existed as if they were real the eye has to be supplied with cues: perspective, lighting, colour, near objects obscuring far objects. Why is it so difficult to approach the photograph? What is it for?	interactive synthesis of down-town Boston view out the window. showing different levels: <ul style="list-style-type: none">-polygons-texture-hidden line and surface-lighting-reflections and transmission maybe prepared video or random access series of frames if full interactive control not possible
the quest for photographic realism	Entertainment and advertising appear to have replaced war as the driving engine for realistic computer graphics.	compare with real inverted image from a fast lens at window 'realistic' examples eg Blinn Whitted cinema showing Loren Carpenter, Nelson Max and others excerpts from Tron? always some explanation of how and what was done advertising films video arcade game exposed and running in slowed mode?

Section	Story Line	Material
synthesising an image from scratch cont.		
fleshing out ideas	<p>How do materials or artifacts behave in circumstances so extreme that they cannot be reproduced? What does a topologically interesting surface look like? How do genes get expressed?</p>	<p>films and stills:</p> <p>science: space simuln. molecular biology topology particle physics galaxy models</p>
	<p>What will a house look like and where should it go?</p>	<p>technology: materials deformation weapons</p>
	<p>Which design looks right, fits best?</p>	<p>architectural simulation</p>
	<p>What are the consequences of a business decision?</p>	<p>CAD: one interactive example (Ontario?)</p>
	<p>Computer-synthesised images can lead our imaginations into new domains.</p>	<p>motor industry computer architect rug design ure chip layout Chips&Changes material</p>
	<p>Real time simulation allows us to develop skills by practice. There is a continuum between 'serious learning' (flight simulator) and 'fun' (video game).</p>	<p>examples of CAD products</p>
		<p>graphical visicalc representation of data</p>
		<p>maximise feel for playing with possibilities while revealing just what computer is doing</p>
		<p>flight simulator film video game film</p>

Section	Story Line	Material
images from scratch cont.		
art	"de gustibus non disputandum est" -at least probably not here.	Cohen, Resch and others (international) quotes by artists technical notes a more 'artistic' approach here

END