

September 2, 1982

To Alan Kay, Chris Jeffers

From Bob Stein

Subject: Bell Labs

Earlier this week I spent the better part of the day at the Computer Technology Research Laboratory of Bell Labs. While my original reason for going was to see a demo of a videodisc project, it turned out that this particular division of Bell Labs is extremely interested in the possibility of joint efforts with Atari (and Lucasfilm) so that when I got there they put on an impromptu show, brought in the director etc. The director, Hal Alles succeeded Bob Lucky who has been promoted. I also met with among others, G.D. Bergland, the head of the Digital Systems Research Group and Ron Gordon who runs a video technology group under Bergland. While I'm not sure of the breadth of the charter which this laboratory operates under (there are approximately 60-75 scientists at the PHD level) one of the strong areas of interest is entertainment. Here is some of what I saw:

1. Ron Gordon's group has developed a computer driven videodisc based information kiosk for Disney's EPCOT. From what I saw this is a well conceived and engineered system which permits the user to browse the attractions and services at EPCOT. I particularly liked the infrared touch screen system which responded quickly and accurately to even the most languid stabs at the screen. Also, they put a lot of effort into getting the human factors right, including extensive on site testing at Disney World in Orlando. Gordon is presently setting up an advanced video lab. According to him, he believes they are working on many of the same questions as Atari and Lucasfilm and they are very interested in seeing if there is a basis for collaboration. For example, they are using an Ikonas frame buffer and have written software to drive it. They would like to see if Atari and Lucasfilm would like to adopt their software to facilitate communication etc. (Eric H. interviewed with Ron Gordon and may have a more developed sense of what this particular lab is up to.)
2. They showed me two different areas of game related research. The first was work in 2½ and 3D animation, including its use in multi-player networked games. From my limited perspective I thought what they showed me here was impressive - in terms of the real time user control over a 3D object. They also demonstrated a

set-up involving 2 Atari 400's each of which had a special modem (\$100 retail - their offhand estimate) which permitted 2 people to play a 2 man version of Star Raiders using a 300 baud transmission rate. The action of one player is represented in real time on his opponents screen allowing for actual dog-fights etc.

As they explained it, as AT&T heads toward the break up, they realize the lab will have to go out and hustle work. They are looking to do research for other companies on a contract basis and possibly to enter into joint venture arrangements. They have tried to contact Atari through its legal department but got no response. In terms of immediate game applications, they are now trying to contact Activision (and I assume Mattel etc.) Basically these guys are very inexperienced entrepreneurs trying to find their way. They would most like to work with us and Lucas (Alan's coming to Atari was of great significance to them as was the announcement of the Atari/Lucasfilm connection), but if they get no positive response they will definitely go elsewhere. Given the quality of the people in this group and even the limited amount we know about the range of their interests, it might be a serious loss if they were to go with a competitor.

Alles suggested that they would love to host a delegation from Atari research (hopefully including A. Kay). I strongly recommend we go talk to them; the potential of some sort of alliance seems great. We'd be crazy to let this one hang out there too long. Just say when, I'll make the arrangements.