June 16, 1982

Dear Alan:

Following is a brief outline describing certain aspects of a possible scenario for what we might want to do. It's sketchy and tenuous but should be enough to get us started at tomorrow's meeting.

This particular conception was shaped in large part by trying to come up with satisfactory solutions to three problems:

1. The need to reconcile the incredibly long development time needed for the intelligent encyclopedia with our desire to put something on the market relatively soon.
2. The high developmental cost of the intelligent encyclopedia (probably making it necessary to try to use some of the components in more than one product).
3. The relatively low level of practical understanding of what the encyclopedia should "look like" - ie. the need to do a lot of experimentation along the way.

Taken together these three all seem to point in the direction of developing the encyclopedia in the context of a more broadly conceived publishing company. Although its most significant product/service would be the encyclopedia, this company would be a publisher of a broad range of products all of which would center on the use of new technologies to provide rich learning opportunities and/or sophisticated information retrieval. Efforts will be aimed principally at the consumer market, but will have definite appeal to the school and library market as well as the business community. While being closely linked with and identified with Atari, the products should be hardware independent - perhaps they will work "better" on Atari machines, but they should be accessible to people with Apples etc. From the beginning the company should be international, at least in perspective.

The basic strategy is to develop both short and long term products in parallel. At the very least the short and long term products should be complementary. Whether it is feasible for the initial online system (discussed below) to actually evolve directly into the intelligent encyclopedia must be considered in some depth.

The short term products (actually a misnomer since as conceived here, we wouldn't necessarily stop producing certain "short term" products like videodisc programs after the intelligent encyclopedia is a reality) need to do the following:

- provide a lot of the experience necessary for development of the intelligent encyclopedia
- provide material which can be incorporated into the intelligent encyclopedia (video sequences, computer simulations etc.)
- generate income

The short term products fall into two basic categories - videodisc and computer programs capable of standing on their own and an online encyclopedia based on existing EB materials. (see note marked by * at bottom of next page)

Videodisc and Computer Programs -

Use videodisc and computer (both alone and together) to provide broad range of programs, appealing to children and adults (not necessarily the same programs). Concentrate on "what-if" learning, simulations and limited encyclopedic applications - eg. videodisc encyclopedia of dinosaurs or a child's introduction to space exploration.

It is likely that the new company we're talking about would enter into various joint ventures to finance, develop (and distribute) these products. For example, some might be produced with Lucasfilm, CTW, Disney etc. In theory, these programs if done well and marketed intelligently can be money makers relatively early on.

Online Encyclopedia -

Aim for producing an online product based on existing EB materials within three years. The third year to include extensive testing and refining of service (test to be conducted by offering service to all potential users in a given geographical area - eg. all QUBE subscribers in Columbus or all Santa Monica residents.

The method of delivery (whether cable or phone co.) during the test phase and beyond needs to be determined later, when there is a lot more understanding of the issues.

Sold on a subscription basis (although heavy individual and institutional users might be required to pay a surcharge) this service will take some time to recoup its investment, although, again in theory, it should by a certain time at least start to pay for itself, even if it is not able to pay back the entire investment before it is replaced with the intelligent encyclopedia.

Minimum features of system
- full text searching
- browsing capability
- at least two modes, child and adult (perhaps drawing on text from Comptons in the first case and EB in the second

Possible enhancements
- semantic roadmaps (I want to be able at any time to push a button and flip to a semantic map which shows me graphically where I am in the domain and where I could go from here) - This may actually be the key to browsing.

- audiotex
- "answer machine" (By prompting the user to formulate questions using a well-defined who, what, when, where, why structure it might be possible to mimic a natural language query system. Fill in the blanks:"Who __(verb)__ the __(noun)__?
- user contact with system, permitting user feedback, direct assistance, and/or communication with other users
- gateway to other information services
- a videodisc picture bank for illustrations
- direct link to existing videodisc programs; ie. online encyclopedia refers user to existing videodisc program (eg. the dinosaur disc) and then if the user has the disc, he can incorporate it into encyclopedia, using online component to "drive" disc.
- dictionary (EB owns Merriam Webster)

Intelligent Encyclopedia -

Right from the beginning, separate from any work done on the short term products, work will be begun on the intelligent encyclopedia. In the main, the task of developing the encyclopedia will be entrusted to a specially created institute responsible both for basic research into the numerous questions relating to the precise nature of an intelligent encyclopedia and for coordinating and guiding the creation of the content itself. [How Atari corporate research fits into this needs to be worked out]. The institute will be located at or near a major university. Cambridge or Palo Alto seem to be likely candidates since the university in question needs to have significant depth across all departments plus particular strength in the area of computer science, telecommunications and education or learning theory.

Considerable attention must be paid to how to integrate the work on the short term products with the work on the intelligent encyclopedia. Out of necessity these will have to be somewhat separate enterprises, but significant cross-pollination is crucial.

* (from preceding page) - Van Doren suggested that the online encyclopedia include only the Micropedia, and that users wanting Macropedia articles could send for them by mail. His rationale here was that he didn't want to compete with EB itself and that the long Macropedia articles might be out of place in an online system. Since I am assuming that the interface for the system will permit easy management of the contents, I tend to discount the second concern. The first is a point for negotiation. I don't think we care if the online encyclopedia competes with the paper EB. However, perhaps for technical reasons we would prefer a smaller database.

Structure of "The Company" and the Role of EB

We need one company which will oversee, coordinate and guide all the work described above (including questions of marketing and distribution. This company could either be a subsidiary of Atari or a joint venture with EB or another company. Van Doren is convinced that Swanson would prefer simply to have Atari pay EB a royalty and not enter into a joint venture. Frankly, given that what we are talking about becomes the future of EB, I can't imagine that the more farsighted members of the board will be content to turn EB into a coupon clipping company that just collects royalty payments. On the other hand, since Atari will be putting up most of the money anyway, I don't see where it is in Atari's interests to have a joint venture with EB if you can get everything you need from them just by paying royalties. In any case, if Atari's initial offer is simply to pay royalties (+ the right to buy a limited amount of stock) and it turns out EB doesn't like that, Atari can always fall back on the joint venture arrangement. The one tricky thing is that if it is not a joint venture, we need to decide what EB will receive royalties on - all products or just those bearing the EB name. For example, suppose we do a videodisc with Lucasfilm and the Smithsonian on dinosaurs, would we want to or be disposed to pay a royalty to EB if they are not part of the overall joint venture. I think not. In any case we need to bring in some of the business people to take up the question of formulas for royalties etc.

Assuming for the moment that EB agrees to a royalty arrangement Atari should require the following from EB.

EB would be expected to:

- give Atari exclusive access to all EB encyclopedias and not permit the EB name to be associated with any other electronic encyclopedia
- provide some personnel knowledgeable in the methodology of encyclopedia creation; access to all relevant EB files and facilities
- use good offices to enlist the participation of scholars and experts
- sell and promote the products of The Company (and perhaps other Atari products) through its direct sales staff