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Strategies for Multi-Media Computing in the Social Sciences
A Working Draft

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Strategic Goal

To make multi-media computing the dominant medium for advancing and disseminating knowledge in the social sciences and to ensure that IBM becomes the dominant technology provider for that market.

Fundamental Questions

- What knowledge resources must be available through multi-media computers for that to become the dominant medium in the social sciences?
- How can these materials be made more useful academically through multi-media computers than they are through traditional media of scholarship?
- How can these materials and multi-media tools for working with them be presented so that professors and students will find them easy to use and effective means to achieve their purposes?
- How can a better understanding of the medium help establish standards for identifying intellectually effective materials and promoting their cumulative, self-reinforcing development?

Knowledge Resources

- **What knowledge resources must be available through multi-media computers for that to become the dominant medium in the social sciences?**

Traditional forms of information need to be included. We should develop a comprehensive ensemble of knowledge resources -- text, maps, statistics, still images, audio, graphic animations, moving images, simulations.

- **Initiating archives of materials for work with multi-media computers needs to be on a scale sufficient to sustain creative scholarship in the social sciences.**
- **Ample public domain materials exist with which to prime the pumps and initial efforts should concentrate on making these available through multi-media computers.**
- **Materials of different forms should be packaged with the assumption that they will be utilized with commonly available software packages. Text with WindowsWord and Guide, maps with GeoVision, statistics with Excel, still images with CorelDraw! and Assymetrics, animation with Grasp and Assymetrics audio with Assymetrics, and moving images with a standard video capture board.**
- **Major institutions devoted to preserving our cultural heritage should be enlisted as hosts to the effort to build the requisite archives. Among these would be the Library of Congress, the Smithsonian, the New York Public Library, the New York Historical Society, the Metropolitan Museum of Art, the Museum of Modern Art, the Museum of Broadcasting, and so on.**
- **An advisory board of leading historians and social scientists should be constituted to review the selection of specific materials to include in the initial archives.**

One generic DV-I disk that contains a well-chosen, very fundamental collection of intellectual tools and key resources, needs to be developed to draw people to making multi-media computing the prime means for conducting their intellectual work.

Enabling and Activating Strategies

- **How can these materials be made more useful academically through multi-media computers than they are through traditional media of scholarship?**

New technologies have powerful effects on educational institutions when they engender new ideas about what knowledge is and how it is to be produced.

Multi-media computing in the social sciences needs to be introduced in such a way that scholars in the field will perceive a powerful, effective means for generating and disseminating new knowledge in their areas of general and special interest.

Interactive tools need both to be effective and to appear effective; use of them needs both to be feasible and to appear feasible to the average academic.

Work with multi-media computing in history and the social sciences needs to be seen as the best way to advance a scholar's aims to contribute substantively to a field and to win recognition and reward for doing so.

Tools and Users

- How can these materials and multi-media tools for working with them be presented so that professors and students will find them easy to use and effective means to achieve their purposes?

To ensure maximum use, hardware should be industry standard.

- A system should be powerful yet simple with all its functionality built in and well integrated. The system should make
  - full use of the 80386 CPU
  - built-in quality sound and video capture capacities
  - a high-speed fixed disk of at least 120 megabytes capacity
  - at least one, preferably two, built-in DV-I drives

Interface should provide direct access to substantive materials.

- Consistent, intuitive graphic command such as Presentation Manager
- Standard software packages should be used wherever possible to present substantive materials
- User work-spaces will be read-write and the locus of substantive material on physical devices should be transparent to the user
- One, generic, DV-I disk, packed with basic material useful in the study of history and the social sciences, needs to be developed and made into the substantive keystone of multi-media computing in these areas.

Users -- three overlapping groups involved in the study of history and the social sciences.

- Archivers: Professionals dedicated to making the materials requisite for these disciplines available for study. They will need DV-I mastering facilities with powerful authoring tools and materials preparation capacities (digitizing, animating, video capture, etc.). They will be engaged primarily in creating read-only collections for use by the next groups.

- Scholars: Advanced students and professors engaged in creating and disseminating knowledge in their fields. They will need access to full collections of materials relevant to their interests and authoring capacities that will enable them to create original works and to disseminate those to their peers. They will be engaged in academic publishing, using DV-I collections to create interpretations, arguments, theses, recommendations, study curricula, and the like. They will disseminate their work in read-write form and the best of it will be collected into further read-only packages.
- Students: Beginning and intermediate students (college and beyond) learning the tools of inquiry in various fields and practicing the techniques of analysis and expression in those fields. They will work with selections of materials produced by the scholars in various areas.

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