Bill Ferster

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I have a long track record of creating innovative products in a number of sectors, from animation, motion picture, and video industries to education. My specialty is developing highly interactive data-driven web applications for education.

Full CV and live examples of work at: www.stagetools.com/bill

AREAS OF EXPERTISE

- **Educational Technology –** Author of two well-regarded books on the history of educational technology. Deep expertise in the use of technology in education, including K-12 constructivist learning tools, machine learning, and adaptive learning systems.

- **Data Visualization and Mapping –** Author of a textbook on using interactive visualization in the humanities and developer of a number of NEH-funded web-based visualization tools.

- **Natural Language Processing –** Using the latest machine-learning and NLP technology, including TensorFlow, BERT, Spacy, and Rasa.

- **Digital Video and Media –** Developed the first nonlinear editing system, the EMMY award winning EMC2 Digital editor and continue to push the envelope with web-based.

EXPERIENCE

Founder, StageTools, 1996-present

- Developer of *MovingPicture*, a software tool used by all the major network television and cable companies, and independent documentary film producers, including Ken Burns, to create motion from still images: www.stagetools.com.

Project lead, Harvard University, 2021-2023

- Direct the *LIZA/Teaching with Grace* student-teacher simulation project for the GSE's *Reach Every Reader* initiative, funded by the *Chan Zuckerberg Initiative*.

Research Professor, University of Virginia, 2013-2021

- Faculty appointment to the Curry School of Education.
- Director of *Interactive Visualization* projects at the Science, Humanities, and Arts Network Technology Initiative: www.viseyes.org.
- PI on multiple NEH grants to explore interactive visualization of historical topics.
- Developed multiple highly interactive web applications for education.

General Manager Editing Products, Dynatech Video Group, 1994-1996

- Transitional role following the EMC acquisition.

Founder, Editing Machines Corporation (EMC), 1988-1994

- Founded EMC in July 1988 to develop and manufacture the first digital nonlinear EMMY award winning video editing system for the film/video industry.

Director Product Strategy, Pansophic Systems, 1987-1988

- Transitional role following the acquisition of *West End Film*.

Founder, West End Film, 1980-1987

- Designed and manufactured the first PC-based motion control system. Designed and marketed a series of software packages for computer animation and design.

EDUCATION

- **PhD in Education and technology –** University of Virginia, 2006
- **BFA in Design –** George Washington University, 1979

SKILLS

- Fluent in JavaScript, Java, PHP, HTML5, CSS, and C++ computer languages
- Quantitative/qualitative research design and statistics
- Mapping, and geographic information design
- Data visualization tools and techniques

BOOKS

Ferster, B. (in press). Designing Media-Based Learning Tools. In Tillman, D. (Ed.), *Exploring Perspectives on Creativity Theory and Research in Education. New York, NY:* Springer

Ferster, B. (2016). *Sage on the screen: Education, Media, and How We Learn.* Baltimore: Johns Hopkins University Press.

Ferster, B. (2014). *Teaching Machines: Learning from the intersection of education and technology.* Baltimore: Johns Hopkins University Press.

Ferster, B. (2012). *Interactive visualization: Insight through inquiry.* Cambridge: MIT Press.

AWARDS / GRANTS / PATENTS

- **American Library Association** – Best 25 educational web sites, 2009
- **Jerry Price Innovative Technology Award** – Society of IT & Teacher Education, 2008
- **Emmy Award** – EMC: "Outstanding Technical Achievement", 1993
- **National Endowment for the Humanities** – $339,713, 2008, 2012-2015
- **PrimarySourceLearning (Library of Congress)** – $238,370, 2007, 2008
- **J.B. DuPont Foundation** – $154,700, 2007-2008
- **US Patent Number 5,559,562** – MPEG Editing seminal patent, 1996