

The Main People Behind “The Mother of All Demos” and Its Impact

The event we have depicted in our tableaux vivant (still life photo) is Bill English working at an “ergonomic” workstation in Douglas Engelbart’s lab where he is using a computer mouse, chord keyset and keyboard to “...experiment and determine the speed and comfort of various pointing devices...”. As he is working, his fellow teammates watch through two different monitors as they test out the mouse to see if it would be the best device to use for positioning a “bug” or as we call it, an onscreen pointer on the screen (Press). The team “...experimented with several positioning devices, including the DEC Grafacon and knee-controlled device. They gathered data on comfort, speed and accuracy and the mouse won out” (Press). These tests added up to the ultimate demonstration of the oNLine System (NLS), which Doug Engelbart conducted on December 9th, 1968 at Fall Joint Computer Conference in San Francisco. Although the demo is known by Doug Engelbart’s name/title, our team wanted to show that Engelbart did not work alone and had a team of other computer engineers and programmers including Bill who “...co-invented the mouse with Engelbart, orchestrated the Mother of All Demos, and was the brains behind most of the NLS’s technical resources...” (Hernandez).

Before we get into what the demonstration presented and its importance, let us briefly talk about Engelbart’s history building up to this moment. In the mid-1940s, Engelbart was an electronics technician for the U.S. Navy. He was “...inspired by Vannevar Bush’s essay *As We May Think* and Engelbart imagined a radarlike display that would let people manipulate symbols and concepts instead of merely monitoring bogies and blips” (Tweney). In more simple words, Engelbart was interested in how computers could make humans smarter or what he called “augmented intelligence.” At that time, most computer scientists concentrated on artificial intelligence (making computers smart), but Engelbart thought of how he could “...solve humanity’s most important problems by harnessing computers as tools for collaboration and the augmentation of our collective intelligence.” He started developing his ideas at the Stanford Research Institute where “...he set up a lab, the Augmentation Research Center...” and worked with a team to develop a complete computing platform where computers could help people “...facilitate communication and collaboration, making information accessible and easy to manipulate” (Lake). This system was named oNLine System, or more commonly known as NLS. With the help of his team and Bill English, Engelbart “...appeared on stage at the Fall Joint Computer Conference to give his presentation, titled “*A Research Center for Augmenting Human Intellect*” (Engelbart). For the next 90 minutes, Engelbart and his team demonstrated on a large high screen “what you see is what you get” with “...editing, text and graphics displayed on a single screen, shared-screen conferencing, outlining, windows, version control, context-sensitive help and hyperlinks.” And this presentation was also the debut of the computer mouse which Engelbart used to control an onscreen pointer as he demonstrated the various tasks live (Tweney).

This demonstration was acknowledged as one of the most important events in computer history as it had “...kicked off the personal computer revolution with product demonstration that is so amazing it inspires a generation of technologists...” (Tweney). One of the major impacts is that the tech industry adopted the mouse and it has become a staple in our society ever since. Another impact was videoconferencing, which used to cost thousands in the 1960s, but is used almost daily by people in today’s time. Services like Skype, Google Hangout and FaceTime where multiple people can video chat and share collaborative screens to edit for meetings, webinars and recreational use was influenced from the demonstration by Engelbart and his team on the huge screen in San Francisco (Lake). Editing, outlining and sorting data has also grown since Engelbart’s demonstration of copy and paste and formatting styles. Now, in modern graphical word processors/documents, a user can easily select any list or word, pick an outline style and change it as they please. Sorting has also become advanced to just one-click data sorting such as basic alphanumeric sorting, size, etc. Next, windowing has become a staple in modern operating systems as users “...can run dozens of overlapping windows on our machines (computers and phones) and switch graphically among them...” all (Lake). Another impact of

this demo was revision control in which "...a file could be passed around with comments, additions or deletions from each contributor appearing in different colors to be accepted, rejected or modified by editors" (Lake). This is commonly seen in businesses, schools, and every day collaborative tasks using tools like Google Docs where revision control is done by everyone who has access to the file. Its advanced to the point where one can easily roll back to a previous version of a file if necessary. Lastly, hyperlinks have also become commonly used to the point where many take it for granted. Easily accessing new data by clicking on a line of words was "jaw-dropping" back then but now it makes sharing and connecting files and data to others so simple (Lake). Overall, the demo has been a "groundbreaking work in creating the foundations of personal computing" and was even honored by President Bill Clinton in 2000 (Tweney).

For the process of creating this reenactment, our team started off by researching the props in the photo we were reenacting. We decided to have an actor, a mouse, keypad, lamp, wires, chair, desk and two monitors as props to make. Much of the background in the photo would be photo shopped in after we took the photo. William hand carved the mouse from a block of wood and made the "keypad" using metal sheets and wood as well. Mei made one of the monitors from a cardboard box and we borrowed an old desktop monitor from Professor Scarlatos as the other monitor. Jaclyn and Abiye oversaw researching and creating the PowerPoint slides for the presentation. Once we all finished preparing the props, we scheduled a shoot with the professor to borrow his green screen and we picked the best photos from that photoshoot. Then William and Amadeusz worked on editing and photo shopping the background into our chosen photo and placing a filter over the entire photo. Lastly, we reviewed our information, research and photos before creating our final report and presentation.

Link to Slides: https://drive.google.com/open?id=16-RN4OSZm51RI5tGIGE4GayEC9s9h_kPZNKFv5SoB-I

Photos of Process/Photoshoot:





Original Photo vs. Our Final Product





Teammates/Roles/Contact Info:

Mei Jia Lin – Secretary, Researcher, Fabrication/Props

Jaelyn Aloï – Photography, PowerPoint, Research, Fabrication/Props

Amadeusz Lipinski – Team Leader, Photo editing, Research

William Wallace – Actor, Fabrication/Props, Research, Photo editing

Abiye Mekonnen – Research, Photoshoot Prop Setup and Director

abiye.mekonnen@stonybrook.edu

amadeusz.lipinski@stonybrook.edu

william.wallace@stonybrook.edu

jaelyn.aloi@stonybrook.edu

meijia.lin@stonybrook.edu

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