**Response to**

**‘A Brief History of Human-Computer**

**Interaction Technology’**

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“A Brief History of Human-Computer Interaction Technology” by Brad A. Meyers gives a summary of how modern technologies (mouse, direct manipulation of the graphical object, Windows OS, drawing applications, spreadsheets…) are developed. Furthermore, the author mentioned the important role of the government, universities, and corporate in developing human-computer interaction technologies and bringing them into a form suitable for the commercial arena.

I strongly agree with the author’s statement that universities, corporates, and government-supported research must continue and be well-supported to develop the science and technology needed for the user interfaces of the future. In my opinion, it would be so much harder to develop future user interfaces if we missed one of the organizations above. That is also what the author mentions:” without appropriate levels of funding of academic HCI research, there will be fewer doctoral graduates in HCI to perform research in corporate labs, and fewer top-notch graduates in this area will be interested in being professors, so the needed user interface courses will not be offered”

There are four major points that the author wants to deliver:

* The importance of university research in the development of human-computer interfaces
* The history of basic interactions developments between humans and computers
* The connection between universities, corporates, and the government shapes the future of HCI

1. **The importance of university research in the development of human-computer interfaces:**

**Timeline

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According to Figure 1 of [1], we can see most of the current technologies such as Direct Manipulation of Graphical Objects, The Mouse, Windows, Text Editing, HyperText, and Gesture Recognization have been developed and improved over a long period of time. E.g., Direct Manipulation of Graphical Object (directly manipulated with a pointing device) [3] was first demonstrated in 1963 at Lincoln Lab.

After that, there is much more research on the direct manipulating of graphics has been conducted by University Researchers: Light Handles was created at Imperial College in 1966-1967 (a form of graphical potentiometer that was probably the first “widget”) [2], AMBIT/G (implemented at the MIT Lincoln Labs in 1968) … The early development of the interaction techniques popular indirect manipulation interfaces (how objects and text are selected, opened, and manipulated…) by university researchers has contributed a lot to the success of this product even though these researchers were not well-known to the public.

1. **The history of basic interactions developments between humans and computers:**

Even though the HCI technologies have been found in the mid-1950, it is still under development and research until now. I was very surprised about the technology that has been found out seventy years ago still developing at this time. E.g., Direct Manipulating of Graphical Objects, Gesture Recognition, and Multimedia are getting better daily. For example, there is a huge difference between drawing on my father’s iPhone 6 and my iPad Pro. There is no limitation for HCI technologies.

1. **The connection between universities, corporates, and the government shapes the future of HCI:**

The author stated that without most important innovations in HCI have benefited from research at both corporate research labs and universities. The author motivates to help readers to understand the important work of university research in human-computer interaction.

In fact, virtually all of today’s major interface styles and applications have been significantly influenced by research at universities and labs, often with government funding. The author also lists the source of funding in his paper. He claimed that without university research, “many of the advances in the field of HCI would probably not have taken place, and as a consequence, the user interfaces of commercial products would be far more difficult to use and learn than they are today” [1]. I totally agree with this point since it reflects reality.

**Reference:**

Brad A. Myers Human-Computer Interaction Institute School of Computer Science Carnegie Mellon University Pittsburgh, PA 15213- 3891 [1]

Newman, W.M. “A graphical technique for numerical input.” The Computer Journal 11, 1 (1968), pp. 63–64. [2]

Smith, D.C. et al. “The Star User Interface: an Overview.” In Proceedings of the 1982 National Computer Conference (AFIPS), 1982, pp. 515–528. [3]