

THE INTERFACE

INFO 300 Intellectual Foundations of Informatics

READINGS ON THE INTERFACE – WHERE HAVE WE COME FROM? (for lecture Tuesday, November 5)

The interface mediates between the user and an information technology. The early interfaces for computer systems involved physically re-plugging electrical wires and flicking electrical switches. Then the interface between the user (typically a programmer) and the machine evolved to paper tape and punch cards. And from those input devices to command line interfaces on CRT screens. The 1980s heralded the graphical user interface (GUI) that still predominates end-user computing.

The two readings below speak to the development of interfaces. Nielsen provides an historical overview, beginning with batch systems in 1945-1955 and concluding with next generation interfaces that extend beyond traditional GUIs to include multi-dimensions such as time (e.g., animation) and sound (e.g., voice). Winograd prints an interview by the Association for Software Design with David Liddle who directed the Xerox Palo Alto Research Center (PARC) in the 1980s. Among other accomplishments, Liddle spearheaded the effort to develop the Star system, which first embodied the idea of a GUI. Liddle talks about the design process. Winograd concludes with a brief description of the Alto and the Star systems.

Nielsen, J. (1993). Chapter 3: Generations of user interfaces (pp. 49-70). *Usability Engineering*. Cambridge, MA: Academic Press.

Winograd, T. (Ed.) (1996). Chapter 2: An interview with David Liddle: Design of the conceptual model, and Profile 2: The Alto and the Star (pp. 17-36). *Bringing Design to Software*. New York, NY: ACM Press.