

ASCII



32

characters and icons of the computer age

the other gallery

banff centre for the arts

monday october 16

closing reception tuesday october 24 5pm-7pm

pocket protector optional



ARTIST STATEMENT

About ASCII

ASCII (ask'-ee) is an acronym for "American Standard Code for Information Interchange." It is the character set or more specifically a code identifying different characters used by almost all personal computers and by many visual-display terminals throughout the world.

ASCII grew out of a human need to codify and classify reality. As well as encrypt and decrypt information. Originally developed in the United States, ASCII was standardized in 1968 by the American National Institute. It is a seven-bit computer code of 128 unique combinations of characters and control codes. The first 32 characters (0 through 31) are assigned to communication and printer control codes. These non-printing characters include codes that signal the end of a transmission, a beep, escape, backspace and so forth. The second set of characters (32 through 126) are those that appear on all standardized PC keyboards. These include alphabetic symbols (upper and lower case) as well as punctuation characters such as dashes (-, -), the ampersand (&), the asterisks (*), the pound (#) and at symbols (@) and others which have entered our written language, and become a form of shorthand for words & phrases. ASCII enables computers and computer programs to exchange information. In this way text characters are symbols signifying or referring to something else. More recently ASCII has evolved into UNICODE which has become a standard allowing an eight bit code to include accents and other typesetting characters.

History of ASCII Art

ASCII Art was preceded by other forms and technological developments, which would include; Typewriter Art, Teletype, paper-tape and punch card art. One could also site concrete poetry as an influence.

ASCII images function as both pictures, in the sense that they are like the illuminated manuscripts of the medieval period, and text as in the case of ancient forms of writing where symbols represent ideas as in pictograms, ideograms and hieroglyphics. It is difficult to pin-point the advent of ASCII art though some suggest that it came about in the 1960s when it became standardised and the first years of the Internet, circa 1970, saw a host of, BBS (Bulletin Boards), and underground ASCII /ANSI art "groups".

About this Exhibition

The ASCII coding scheme, in terms of ASCII Art, functions as a visual bridge between the theoretical concepts and the perceptual capacities of the viewer. The 94 visible "characters and icons" numbered (032-126) presented in ASCII are arranged by a program called (Pict-to-ASCII), that translates the lights and darks of an image into characters that together create the image new using text. By printing these ASCII portraits the power of text is brought to bare, a power that grew out of the act of writing which was important in the early scarcity of books and the early difficulty in the printing process. By removing the work from a life of electronic communication, the political ramifications are more easily determined and the issues surrounding power structures can be discussed.

The obvious puns "characters" and "icons" take on new meanings in the computer age. Here both the ASCII symbols are evident as well as the persons they comprise, referencing the electronic device that brought them into being. The portraits reference Pointillism, in which points or dots comprise a whole, as well the pixelated nature of computer screens and reproductions through computer printing processes.

The portraits are reminders of achievement and investigation. They are presented as acknowledgement for the development of an invention that involved thousands of curious unknown and unheralded individuals.

It is widely known that much of the research engaged in by the individuals portrayed grew out of military defence initiatives of the 20th Century. This includes the development of Colossus, which was set up to decipher the German "Enigma" Code during WW11 or the ENIAC which calculated missile trajectories. In times of peace, many of these hardware and software inventions and innovations contributed more widely to the consumer demand for more efficient ways to communicate and exchange information. Anyone who engages in work based on the Internet or within the realm of the computer is implicated in the manifestation and proliferation of a form that grew out of war ideology.

32 items, 539.4 MB available



aiken_howard



amdahl_gene



atanasoff_john



babbage_charles



baird_john.tif



bell_gordon



brattain_walter



corbato_fernando



cray_seymour



dean_mark



eckert_john



emeagwali_philip



engelbart_douglas



flowers_tommy



hartree_douglas



hoff_ted



hollerith_herman



hoover_erna.tif



jobs_steve



kalmár_lászló



kao_charles



kilby_jack



lebedev_sergey



mauchly_john



mead_carver



noyce_robert



roberts_ed



wang_an



wiener_norbert



wilkes_maurice



williams_fred



zuse_konrad



adams_jeanne



akinori_yonezawa



backus_john



baran_paul.tif



bellovin_steve



bemer_bob



berners_lee_tim



boole_george



bourgain_jean



bricklin_dan.tif



bush_vannevar



cerf_vinton



church_alonso



davies_donald.tif



de_morgan_augustus



dijkstra_edsgar



eckert_wallace



erdos_paul



ershov_andrei



gates_bill



gödel_kurt



gosseling_james



hamming_richard



holberton_betty



hopper_grace



householder_alston



jevons_william



joy_bill



kahn_robert



kemeny_john



kildall_gary



kleinrock_leonard



knuth_don



lawrence_robert



leech_john



leibnitz_gottfried



lovelace_ada



mccarthy_john



metcalfe_stepane



Mumford_david



napier_john



pascal_blaise



péter_rózsa



postel_jon



quine_willard



rasiowa_helena



ritchie_dennis



schoenberg_isaac



shannon



shaw_mary



spanier_edwin



stallman_richard



stroustrup_bjarne



thompson_ken



tikhonov_nikolaevich



todd_tadusky



torvalds_linus



turing_alan



ulam_stan



von_neumann_john



wilkinson_jim



wirth_niklaus



wornock_john



wozniak_steve

Hardware

- 032. Aiken, Howard - co-developed Mark I, Mark II, Mark III and Mark IV, developed switching theory
- 033. Amdal, Gene - IBM System/360, business mainframe computers
- 034. Atanasoff, John - inventor 1st electronic computer
- 035. Babbage, Charles - inventor differential machine and analytical engine
- 036. Baird, John - fibre optics, mechanical TV, RADAR
- 037. Bell, Gordon - inventor minicomputer
- 038. Brattain, Walter - inventor transistor
- 039. Corbato, Fernando - designer of multiple access computer systems
- 040. Cray, Seymour - 1st supercomputer
- 041. Dean, Mark - IBM Interior Architecture, inventor ISA Systems Bus
- 042. Eckert, John - electronic digital computing, automatic computing, ENIAC, BINAC, UNIVAC
- 043. Emeagwali, Philip - supercomputers, massive parallel computing
- 044. Engelbart, Douglas - inventor of computer mouse, email, hyperlinking, video conferencing and Windows style computing
- 045. Flowers, Tommy - led Colossus development team, decrypted WWII German Enigma code
- 046. Hartree, Douglas - ENIAC, numerical analysis
- 047. Hoff, Ted - co-inventor microprocessor
- 048. Hollerith, Herman - inventor papertape
- 049. Hoover, Erna - inventor computerized switching system
- 050. Jobs, Steve - co-founder Apple, computer/human interaction, improved on the GUI interface, OS and Mac OS

- 051. Kalmar, Laszlo - theoretical computer science, MIR Computer (Hungary)
- 052. Kao, Charles - fibre optics
- 053. Kilby, Jack - inventor integrated circuit
- 054. Lebedev, Sergey - 1st electronic computer in continental Europe (MESM), parallel arithmetic units
- 055. Mauchly, John - automatic computing, ENIAC, BINAC, UNIVAC
- 056. Mead, Carver - physics of computation
- 057. Noyce, Robert - co-inventor microprocessor
- 058. Roberts, Ed - created 1st commercial PC, Altair 8800
- 059. Wang, Al - inventor magnetic core memory
- 060. Wiener, Norbert - cybernetics
- 061. Wilkes, Maurice - EDSAC, subroutines
- 062. Williams, Fred - inventor RAM, Williams Tube
- 063. Zuse, Konrad - automatic computing, 1st program controlled computer, Binary System Utilisation, Floating Point Arithmetic

Software

- 064. Adams, Jeanne - Fortran 9X proposals, vector processing
- 065. Akinori, Yonezawa - concurrent object languages
- 066. Backus, John - Fortran
- 067. Baran, Paul - packet switching, developed the concept of the network

068. Bellovin, Steve - wrote the first Netnews and Usenet programs
069. Berner, Bob - father of ASCII
070. Berners Lee, Tim - developer of the WWW, 1st server, browser and editor
071. Boole, George - Boolean Algebra, binary and proposition logic, differential equations
072. Bourgain, Jean - theoretical computer science, number theory
073. Bricklin, Dan - Visicalc, spreadsheets
074. Bush, Vannevar - writings on IT, hypertext research
075. Cerf, Vinton - co-inventor of Arpanet
076. Church, Alonso - Church's theorem, recursion theory
077. Davies, Donald - packet switching
078. De Morgan, Augustus - De Morgan's Law, mathematical logic
079. Dijkstra, Edsger - encryption, programming methods
080. Erdos, Paul - founded discrete mathematics
081. Ershov, Andrei - theoretical programming
082. Gates, Bill - co-developed DOS, Windows OS monopoly
083. Godel, Kurt - axiomatic mathematical systems
084. Gosling, James - inventor JAVA
085. Hamming, Richard - error detection and correcting
086. Holberton, Betty - ENIAC programmer
087. Hopper, Grace - inventor Cobol, UNIVAC, 1st English language data compiler

088. Householder, Alston - linear algebra, algorithms
089. Joy, Bill - human/computer interaction, Berkeley UNIX, open systems
090. Jevons, William - mathematical logic, recursive theory
091. Kahn, Robert - TCP and IP internet programs
092. Kemeny, John - co-inventor BASIC
093. Kildall, Gary - inventor CPM operating system for Digital Research, 1st widely used OS for a PC
094. Kleinrock, Leonard - ARPANET, network analysis
095. Knuth, Don - compilers, algorithms, digital typography, TeX
096. Leech, John - Leech Lattice
097. Leibnitz, Gottfried - binary system
098. Lovelace, Ada - 1st computer program "plan"
099. McCarthy, John - LISP, artificial intelligence
100. Metcalfe, Stephane - Ethernet, Xerox Parc, 3Comm
101. Mumford, David - algebraic geometry, artificial intelligence
102. Napier, John - Napier Bones, logarithms
103. Pascal, Blaise - inventor Pascaline, mathematician
104. Peter, Rozsa - primitive recursive functions
105. Postel, Jon - managed IANA, internet numbers
106. Quine, Willard - decryption, mathematical logic
107. Rasiowa, Helena - algebraic logic, computer science

108. Ritchie, Dennis - inventor UNIX
109. Roberts, Lawrence - APRANET
110. Schoenberg, Issac - theory of Splines
111. Shannon, Claude - IT, Digital Design Systems
112. Shaw, Mary - software systems
113. Spanier, Edwin - algebraic topology/homology
114. Stallman, Richard - GNU project
115. Stroustrup, Bjarne - C++ programming language
116. Thompson, Ken - co-developer UNIX, C
117. Tikhonov, Nikolaevich - computational mathematics, algorithms
118. Todd, Olga - matrix theory
119. Torvalds, Linus - inventor LINUX, open source
120. Turing, Alan - Turing Machine, artificial intelligence
121. Ulam, Stan - Monte-Carlo Method, statistical sampling
122. Von Neumann, John - logical design, Automata Theory, bit as a measurement of computer memory
123. Wilkinson, Jim - numerical and linear algebra
124. Wirth, Niklaus - inventor Pascal and Modula 2
125. Wornock, John - co-founder Adobe, inventor Postscript
126. Wozniak, Steve - co-founder Apple, programmer