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¹Borsuk (2018)

Borsuk, Amaranth. 2018. The Book. MIT Press.

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²Licklider (1960), Engelbart (1962)

⁴Figure 2 000000000 00 00 00 000000 NLS (Doug Engelbart Institute)

⁵Card, Newell, □□□ Moran (1983)

⁶Card, Newell, □□□ Moran (1983)

⁷Engelbart (1962)

⁸Figure 3 00 000000 0000000000 0000 00000000 (wikimedia)

⁹Figure 4 00000000 00 000000000 (Bullock Museum)

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¹⁰Lanier (2014)

¹¹Engelbart (1962), Weizenbaum (1976)

¹²Licklider (1960)

¹³Freiberger [] [] Swaine (1984), Hiltzik (1999), Hertzfeld (2004)

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¹⁴Waldrop (2001)

¹⁶Figure 6 000000000000 0000000 WordStar (Wikimedia)

¹⁷Raskin (2000)

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¹⁸Figure 7 SAGE Lightgun (MIT)

¹⁹ Figure 8 Sketchpad (History Computer)

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²⁰Figure 9 0000000000 00000000 000 000000 00000 (Pebble)

²¹ Figure 10 000000000 00000000 000 00 Handspring (ACM)

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²²Figure 11 000000 000000 (MIT)

²³Papert (1980), Kay (1993)

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²⁴Figure 12 00000 00 00 Xerox Alto (the PARC Library)

²⁵Kay (1993)

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²⁷ Figure 16 Napster (Wikipedia)

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²⁸ Figure 17 Minecraft (Microsoft)

²⁹Figure 18 00000000 000000000 000 Minecraft (LearnToMod)

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³²Figure 20 00 0000000000 00000 000 Xerox Star (Digibarn)

2.6 0000000 000000000 000 Ivan Sutherland

³³Figure 21 Ivan Sutherland (MIT)

³⁴Figure 22 Sketchpad (Wikipedia)

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³⁵Figure 1 Apple Lisa 1983 (Apple)

³⁶Figure 2 Apple Macintosh 1984 (wikimedia)

³⁷Papanek □□□ Fuller (1972), Thackara (2006)

³⁸Norman (2013)

³⁹Figure 3 0000000 000000 000000 NLS (Doug Engelbart Institute)

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⁴¹ Figure 5 000000 00000000 000 00 0000000 (Doug Engelbart Institute)

⁴²Figure 6 000000 00 0000 000000 (Doug Engelbart Institute)

⁴³Buxton (2010)

⁴⁵Figure 8 000000 0000000 00 Spacewar 000 Dynabook (Alan Kay)

⁴⁶ Carroll (2000)

⁴⁷Figure 9 Apple Knowledge Navigator (Apple)

⁴⁸Figure 10 Sun Starfire (Sun Microsystems)

⁴⁹Winograd □.□. (1996), Moggridge (2007)

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⁵⁰Pering (2002)

⁵¹Figure 11 Buck prototype (Steve Gill)

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⁵³Figure 13 0000000 000 00000 0000000 (Doug Engelbart Institute)

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⁵⁵Figure 15 000000000 000 000000000 00 00000000 000 000 (Microsoft)

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⁵⁷Figure 17 Apple Mouse (wikimedia)

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⁵⁸Card, English, □□□ Burr (1978)

⁵⁹Figure 18 0000000 0000000 000 0000000 0000000 (Elsevier)

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⁶⁰Card, Moran, □□□ Newell (2018)

⁶¹Figure 19 Microsoft Windows 95 (Microsoft)

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3.6 3.6 Douglas Engelbart

⁶²Figure 20 Microsoft Windows 8 00000 000000 0000000 (Microsoft)

⁶³ Figure 21 Douglas Engelbart (Doug Engelbart Institute)

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⁶⁴Figure 22 0000000 000 000000000000 000000000 (Doug Engelbart Institute)

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⁶⁵McEwen [] Cassimally (2013)

⁶⁶Figure 1 0000000 00 00000 000000 (MIT)

⁶⁷Figure 2 Spacewar (MIT)

⁶⁸Figure 3 00000000 0000000 33 (Wikipedia)

⁶⁹Figure 4 JOSS (Wikimedia)

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⁷¹Figure 6 VPL DataGlove (VPL)

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⁷²Figure 7 Trackball (Bill Buxton)

⁷³Figure 8 Telefunken ball mouse (Bill Buxton)

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⁷⁴Figure 9 0000000000 00000000 (Wikimedia)

⁷⁵Figure 10 Teletext (wikimedia)

⁷⁶O'Sullivan □□□ Igoe (2004)

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⁷⁷Igoe (2007)

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⁷⁹Figure 12 MinecraftPi (RaspberryPi Foundation)

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⁸⁰Figure 13 00000 0000 000000 000 00000000 (Wikipedia)

⁸¹ Figure 14 00000 0000 000000 000 000000 (Wikipedia)

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⁸² Figure 15 0000000000 000 000 000 000 00 000 (Fair use)

⁸³ Figure 16 00000 00000000 00 00000 0000 (Apple)

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⁸⁴Figure 17 iPod 000000 000000 (Apple)

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⁸⁵Figure 18 Apple iTunes (Apple)

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⁸⁷D. Norman (2013)

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⁸⁹D. A. Norman (2004)

⁹⁰Garrett (2010)

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⁹¹Figure 21 Larry Tesler (Xerox PARC)

⁹² Figure 22 00 0000000 00000000 (Larry Tesler)

objects. "O'Reilly Media, Inc.".

McEwen, Adrian, $\Box\Box\Box$ Hakim Cassimally. 2013. Designing the internet of things. John Wiley & Sons.

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⁹⁵Figure 3 0000000000 00000000 00000000 Eclipse (Eclipse)

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⁹⁸Figure 6 0000000 00 00 00 00000 Windows Mobile (Microsoft)

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⁹⁹Olsen (2009)

¹⁰⁰Grudin (1990)

¹⁰¹Graham (2004), McConnell (2004), Thimbleby (2007)

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¹⁰²Noble (2009)

¹⁰³Figure 7 Smalltalk (Xerox PARC)

¹⁰⁴Figure 8 Lilith Modula (Safeswisscloud)

¹⁰⁵Andrew □□□ David (2000)

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¹⁰⁸Reas □□□ Fry (2007), Victor (2012)

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¹⁰⁹Figure 11 000000000 00000000 Android (Google)

¹¹⁰Figure 12 000000000 000000000 00000 (Apple)

¹¹¹Ingalls (2020)

¹¹²Figure 13 Pygmalion (Xerox PARC)

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¹¹⁴Figure 15 000000 0000000000 000000000 (Mark Stefik)

¹¹⁶Figure 17 0000000000 00 00000 0000 000 Github (Github)

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¹¹⁸Figure 19 Arduino Uno (Arduino)

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¹¹⁹Banzi □□□ Shiloh (2014)

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¹²¹Figure 21 Reactable (Reactable)

¹²²Figure 22 0000000000 000000000 00 00 Reactable (Anna Carreras)

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5.6 0000000 00000000 000 Bill Atkinson

¹²³Figure 23 Bill Atkinson (Bill Atkinson)

¹²⁴Figure 24 000000 MacPaint 00000 0000000 (Bill Atkinson)

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¹²⁵Figure 1 ELIZA chat bot (wikimedia)

¹²⁶Figure 2 00000 000000 Microsoft Bob (Microsoft)

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¹²⁸Fogg (2003)

¹³⁰Reeves □□□ Nass (1996)

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¹³²Figure 5 Superpaint (Web Archive)

¹³³Figure 6 MacPaint (Computer History Museum)

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¹³⁴Figure 7 000000000000000000000000 VI (Wikimedia)

¹³⁵Figure 8 UNREAL Blueprints (Epic Games)

¹³⁶Figure 9 00000000000 0000000 Gypsy (Xerox PARC)

¹³⁷Figure 10 00000000000 0000000000 (Xerox)

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¹³⁸Rheingold (2000)

¹³⁹Figure 11 Bulletin Board System (blogtoexpress)

¹⁴⁰Figure 12 0000000 00000000 0000000 00 00 Portholes (Xerox PARC)

¹⁴¹Laurel (2013)

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¹⁴²Figure 14 Xerox PARC Media Spaces (Xerox PARC)

¹⁴³Markoff (2005)

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¹⁴⁴Figure 13 000000 000000000000 Videoplace (Myron Krueger)

¹⁴⁵Krueger (1991)

¹⁴⁷ Figure 16 Second Life (Linden Research)

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¹⁴⁸Figure 17 000000 000000 000 thefacebook (Facebook)

¹⁴⁹Figure 18 Lifestreams (Yale)

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¹⁵⁰D. A. Norman (2004)

¹⁵¹ Figure 19 00000000 000 00000000 (ACM)

6.6 000000 00000000 000 Jaron Lanier

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¹⁵³Figure 21 Jaron Lanier (Jaron Lanier)

¹⁵⁴Figure 22 VPL Virtual Reality (VPL)

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¹⁵⁵Figure 1 000000000000 000 0000000000 000 Hypercard (Apple)

¹⁵⁶Figure 2 0000000 000000000 0000 0000 0000 (Craigslist)

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¹⁵⁷Bush □.□. (1945), berners1996past

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¹⁵⁸Shiffman (2009)

¹⁵⁹Packer □□□ Jordan (2002)

¹⁶⁰Barnet (2013)

¹⁶²Figure 4 000000000000 000 00000000 (Jonathan Harris)

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¹⁶³Figure 5 Pong (Wikipedia)

¹⁶⁴Figure 6 Breakout (Wikimedia)

¹⁶⁵Figure 7 RAND tablet (RAND)

¹⁶⁶Figure 8 Genesys (MIT)

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¹⁶⁷Garrett (2010)

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¹⁶⁸Bolt (1978)

¹⁷⁰Figure 10 000000 0000000 Dataland (MIT Media Lab)

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¹⁷¹Malone □□□ Crowston (1994)

¹⁷²Baecker (1993)

¹⁷⁴Figure 12 0000000 000000000 00000000 (Amazon)

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¹⁷⁶Figure 13 000000000000 (Carnegie Mellon University)

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¹⁷⁸Figure 17 000000000 0000000000 0000000 0000 Wikipedia (Wikipedia)

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7.6 0000000 000000000 000 Ted Nelson

¹⁸⁰Figure 19 Ted Nelson (The Transcopyright License)

¹⁸¹Nelson (1974)

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¹⁸²Nelson □.□. (2010)

¹⁸³Figure 20 Xanadu 000000000 00 00000 000000000 (The Transcopyright License)

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¹⁸⁴Figure 1 0000000 00000000 0000000 Apple Macintosh (Apple)

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¹⁸⁶Freiberger □□□ Swaine (1984)

¹⁸⁷Figure 3 Apple II (Apple)

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¹⁸⁹Hertzfeld (2004)

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¹⁹⁰Figure 5 Xerox Tab (Bill Buxton collection)

¹⁹¹ Figure 6 0000000 000000000 (Mark Stefik)

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¹⁹²Figure 7 □pple Newton (DAVIDSDIEGO)

¹⁹³Figure 8 Apple iPhone (PAUL SAKUMA AP)

¹⁹⁴Figure 9 0000000 0000000 000000 (wikimedia)

¹⁹⁵Figure 10 LINC PC (MIT)

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¹⁹⁶denning1998beyond

¹⁹⁷Figure 11 Electrocular (ARPA)

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¹⁹⁹Waldrop (2001)

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²⁰⁰Nelson (2008)

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²⁰¹Kay [] Goldberg (1977)

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²⁰²Lanier (2017)

²⁰³Figure 13 0000000 000000000 0000 0000 0000 (Xerox PARC)

²⁰⁵Engelbart (1988)

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²⁰⁷Figure 16 Commodore64 demoscene (Wikimedia)

²⁰⁸ Figure 18 UNIX shell (Wikimedia)

²⁰⁹Kernighan (2019)

²¹⁰Figure 17 0000 000000000 PDP11 (Courtey of Wikimedia)

²¹¹Figure 20 Mattel PowerGlove (Mattel)

²¹²Figure 19 Atari 2600 (Wikipedia)

8.6 0000000 000000000 000 Jef Raskin

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²¹³Figure 21 SwyftWare (hackaday)

²¹⁴Figure 22 Jef Raskin (Jef Raskin)

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²¹⁵Ingalls (2020)

²¹⁶Roszak (1986)

²¹⁷Figure 1 Norton Commander (Wikepdia)

²¹⁸Figure 2 SugarOS neighborhood (wikimedia)

²¹⁹Mumford (2010) Ihde (2012)

²²⁰Nelson (2010)

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²²¹Raskin (2000)

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²²²Gildall (1993)

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²²⁶ Figure 6 UNIX TMG (Wikipedia)

²²⁷ Figure 7 Tennis for Two (wikimedia)

²²⁸Figure 8 Magnavox Odyssey (Philips)

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²²⁹Engelbart (1962) Lanier (2010)

²³⁰Bolter [] Grusin (2000)

²³¹lakoff2008metaphors

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²³²Figure 10 000000000 000000000 000000000 (wikimedia)

²³³Bardini (2000)

²³⁴Hiltzik (1999)

²³⁵Figure 9 000000000000 0000000 000 Lisa (Bill Atkinson)

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²³⁶Wirth [] Gutknecht (1992)

²³⁷Figure 11 Data General Nova (Academic Kids)

²³⁸Figure 12 Altair 000 00000000 (wikimedia)

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²³⁹Kay (1993)

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²⁴⁰Figure 15 000000000 000000000 (Wikimedia)

²⁴¹ Figure 16 Virtual Network Computing (Wikipedia)

²⁴²Figure 17 Xerox Alto (DigiBarn)

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²⁴⁵Figure 20 Xerox Cedar (toastytech.com)

²⁴⁶Figure 21 Alan Kay (Alan Kay)

²⁴⁷Figure 22 Squeak (Bauman National Library)

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