

HUMANS VS COMPUTERS

by Gojko Adzic



Humans vs Computers

Wrong assumptions, computer bugs, and
people caught in between

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LeanPub Sample

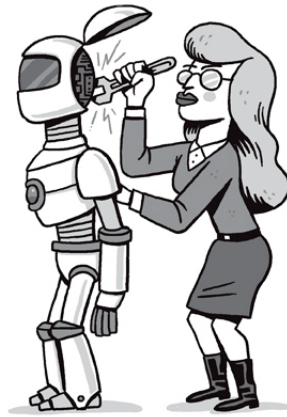
Dear Reader,

Thank you very much for downloading the sample of *Humans vs Computers*. This sample contains some nice stories from the full book, and a list of resources and references for further research. The full book contains many more stories, and a summary of heuristics, collected from all the stories, that you can use to make your software less error prone.

Gojko

Introduction

There's no doubt that computers are running our world, having the final say on everything from the price of your morning cup of coffee to global foreign exchange rates. Governments around the world are quickly becoming digital. Jobs are getting replaced with algorithms. Ubiquitous automation, along with some clever marketing, tricks us into believing that phones, TV sets and even cars are somehow smart. Yet all those computer systems were created by people – people who are well-



meaning but fallible and biased, clever but forgetful, and who have grand plans but are pressed for time. Digitising a piece of work doesn't mean there will be no mistakes, but instead guarantees that when mistakes happen, they'll run at a massive scale.

This book is about ordinary people caught between bad assumptions and binary logic. You'll read about humans who are invisible to computers, how a default password once caused a zombie apocalypse and why airlines sometimes give away free tickets. This is also a book on how to prevent, avoid and reduce the impact of such problems.

As a professional software developer, I'm much more guilty than

the average person of driving civilisation towards a digital apocalypse. At the same time, I've been on the wrong end of a computer bug frequently enough to appreciate the pain that such a thing can create. This book is my attempt to raise awareness about some common and dangerous, but perfectly preventable, types of software blunders. I also want to help ordinary people fight back against digital monsters.

Knowing how software developers think, and what kind of mistakes they're likely to make, helped me open a bank account against the better judgement of a robotic workflow, resolve extortionate utility bills and even recover my debit card after it was kidnapped by an angry ATM. The next time you bang your head against a digital wall, the stories in this book will help you understand better what's going on and show you where to look for problems. If nothing else, when it seems as if you're under a black-magic spell, these stories will at least allow you to see the lighter side of the binary chaos.

For my colleagues involved in software delivery, I hope this book helps you find more empathy for people suffering from our mistakes, as it's always people who pay the price in the end. My intention with this book is to illustrate some typical, common mistakes with memorable stories, not to create a comprehensive guide for software quality. However, the final part of the book contains some nice tips and tricks, combined from all the stories, that you can use to make your software less error prone.

For the impatient

The [Inverse Monkey Rule](#) part contains checklists and heuristics that you can use during analysis, development or testing.

610,000 JPY

When Dentsu Inc started trading on the Tokyo Stock Exchange in December 2001, financial analysts watched the stock price with great expectations. Dentsu was one of Japan's largest advertising companies, and the event was one of the biggest initial public offerings that year. In the early hours of trading, the stock value surprised everyone



by falling through the floor. A single trader in Tokyo, working for UBS, caused the crash by mistake. Instead of offering to sell 16 Dentsu shares at 610,000 yen (roughly US\$5000 at that moment), the trader offered 610,000 Dentsu shares at 16 yen each. The Wall Street Journal reported that, upon noticing the error, 'UBS's trading floor in central Tokyo went into a panic, with a cacophony of yelling and screaming.' The mistake was rolled back after just two minutes, but ended up costing UBS almost US\$100 million.

Not to be outdone, a trader at Mizuho Securities caused even bigger chaos in 2005 with a touch of, as the financial news broadcasters all over the world named it, a 'fat finger'. Instead of offering to sell one share of the recruitment company J-Com at the price of – imagine the coincidence – 610,000 yen, the trader offered 610,000 shares to the market at a price of 1 yen each. Needless to say, the bargain was quickly picked up by anyone with a pair of eyes. Other investment banks made a killing, but the biggest individual winner that day was Takashi Kotegawa, 27 and unemployed. He

made a profit of 2 billion yen, roughly US\$15 million at the time. Mizuho Securities tried to recall the offer after spotting the error, but a bug in the Tokyo Stock Exchange systems prevented that from happening. Takuo Tsurushima, president of the Exchange, resigned over the issue. Mizuho ended up picking up the bill for the whole episode, to the total of 40 billion yen.

Fat-finger errors are a human mistake and happen all the time, all over the world. But the ones that make news all, as a rule, happen in Japan. In 2009, UBS placed an order for bonds issued by the game-maker Capcom worth 3 trillion yen (US\$31 billion), 100,000 times more than it intended. Luckily, the order was placed through an off-hours trading system, and UBS was able to reverse it before it caused an impact on the market. In 2014, a tsunami of 67.78 trillion yen (US\$617 billion) of fat-finger orders hit the Tokyo Stock Exchange, but this time they were cancelled in time. Bloomberg reported that the value of the error was greater than that of Sweden's economy.

Fair enough, people in the Land of the Rising Sun wake up before everyone else, so sleepiness might be causing fat-finger more errors than in other places. But there's actually a good reason why it's always Japanese trades that are so error prone. ISO standard 4217, controlling the display of currency information, requires that amounts in yen use just integers without decimal places. This makes it easy to confuse currency amounts and other numbers, such as how many bonds you want to sell. My UK bank, for example, tries to prevent careless fat-finger errors by requiring that all currency amounts have two digits. If I want to pay £50 to someone, the bank will only let me enter it as 50.00. That's how it prevents people entering the payment reference



into the amount field, or the other way around. With Japanese yen, that kind of validation just isn't possible. Even worse, third-party software might mysteriously complain if you do try to supply decimals with yen amounts. That's why the popular Q&A site Stack Overflow is full of questions relating to incorrectly formatted item errors when using yen with PayPal.

The humble yen is a lovely edge case, even for developers not working in Japan. In fact, it's the people in the West who are most at risk of making daft mistakes. Floating-point numbers aren't precise, so they aren't suitable for financial calculations. That means that financial amounts often get represented by integers or special-purpose database types that record numbers to a fixed number of decimal points. Because most developers live in countries where two-digit amounts are taken for granted, it's quite common to see code where amounts are multiplied by 100 before saving. In fact, to prevent rounding errors, many payment APIs require amounts as integers. That works the same for euro, British pounds or most other popular currencies. But not for yen. A payment request for 2000 using a popular payment gateway Stripe might only ask for US\$20, but it will ask for 2000 yen. That's why there's a special warning about yen amounts in the Stripe payment documentation. For an even weirder edge case, consider Kuwaiti dinar (ISO code KWD), which should use exactly three decimal places.

In plain English, the correct way to record financial amounts is to use an integer in the smallest currency-amount units. A US dollar consists of 100 cents, so the smallest unit is a cent. But the smallest currency unit in Japan is 1 yen, so all kinds of wrong assumptions about always multiplying by 100 or adding two decimal places cause weird and wonderful bugs. Yen is not the only zero-digit currency in use, but it's by far the most popular one. Very few developers ever had to deal with payments in Rwandan francs, but Japan is a huge market so it's quite likely that people working even for mid-size US or European companies need to deal with yen payments at some point.

Mr Test

An ominous preview of Knight Capital's meltdown happened a whole year earlier, illustrating another key risk for automated decision systems. One of Knight's primary sources of revenue was market making for many smaller electronically traded funds. Market makers play a crucial role in financial exchanges by guaranteeing to buy or sell at a certain price, effectively ensuring that someone



is always interested in matching an offer for less popular financial instruments. Knight Capital was a key player in one of the biggest stock exchanges in the world, so it had to ensure that its systems could continue working even in the event of data centre problems. In October 2011, Knight decided to test its disaster recovery plans. The test happened over a weekend, outside normal working hours, and was a success. What followed was everything but.

Market making is a high-volume business, mostly automated, so the engineers used a large set of test data to simulate a relevant flow of trading requests. Everything worked well, and people went home knowing that their recovery procedures could survive even a small disaster. Inadvertently, however, a disaster had been triggered for the next day. Someone had forgotten to remove the test data after the experiment. When trading resumed on Monday morning, Knight's computers continued to use the test data to match offers from the exchange. As a result, Knight lost more than US\$7 million

before someone spotted what was going on.

Although leaving test data in the real system for Knight was a mistake, software is often built to support running tests alongside real work. The more complex a system, the more likely it is to break at the seams. Having some way to place a test order or book a test trade is a cheap and effective way to check that everything is working, effectively putting some much needed automated oversight around algorithmic decision making. To make that idea work, however, it's critical to actually recognise the test cases.

Computers at Hartsfield–Jackson International Airport in Atlanta failed to spot the test on 19 April 2006, causing travel chaos around the world. In order to prove that the security systems and staff are not asleep, the luggage X-ray machine at the airport occasionally shows images of suspicious devices. Normally, the computer identifies the suspect device and, a few moments later, warns that the alarm is part of a test. However, that Wednesday, a computer failed to identify a test case. The Transportation Security Administration agent screening luggage noticed something that looked like a bomb, but couldn't find a bag that matched the image. He alerted a supervisor, and the two of them went through all the luggage on the conveyor belt again. The test bag invented by a computer wasn't there, of course. This was too strange to ignore, so the two of them escalated the problem to the security director, who decided to call the Atlanta police bomb squad. Passengers had to evacuate the terminal, and all flights were grounded for two hours. Hartsfield–Jackson International is the busiest airport in the world, so the delayed flights caused a knock-on effect and disrupted travel around the world.

Test data problems can stay under the radar for a long time. The US Securities and Exchange Commission fined Citigroup more than \$7 million in 2016 because of a software glitch that caused the Global Markets division of the bank to incorrectly report regulatory data for 15 years. Citigroup Global Markets assigned test trades

to special bank branch codes, ranging from 089 to 100. In 1999, the bank changed from purely numeric to alphanumeric branch codes. Some real branches had codes starting with the number 10 and followed by a letter, but the regulatory reporting software incorrectly assumed they were just tests and decided not to include any related trades in ‘blue-sheet’ reports.

People sometimes make up special cases for testing that couldn’t possibly happen in real life, but make wrong assumptions about the world. James Bach got a parking ticket from the city of Everett on 16 December 2010, although he’d never parked in Everett. A county clerk confirmed that the ticket was in the system, but was confused by the case number. All tickets in Everett start with the number 10, but this one was 111111111. It turned out that the city of Everett had started using a new automated ticketing system just a few days before the alleged violation. Someone had obviously tried it out by issuing a made-up ticket that was easy to type in. That’s why the case number was all 1s. To ensure the ticket was clearly flagged as a test case, the tester issued it for the licence plate TESTER. Bach, a well-known software testing consultant and author, actually has a custom licence plate matching exactly that name. Luckily the clerk quickly recognised the error, and a judge dismissed the case.

The way to avoid such tunnel vision caused by idealistic data is to test software upgrades using real-world examples. However, this can create huge problems if test cases are not clearly identified. On 16 March 2010, New York police raided a house in Marine Park in Brooklyn. The house had been raided more than 50 times in the previous eight years, so New York Police Department officers were



prepared for heavy resistance. Instead, they found only Rose and Walter Martin, both over 80 years old.

The Martins had got used to the police banging on their doors, sometimes up to three times a week. On paper, the address looked like a hotbed of crime, but in fact this was all caused by a software test gone wild. In 2002, the police had used the Martins' address as part of a random data sample to test a new software system, but forgot to remove the test records afterwards. As a result, officers from all over New York started showing up in Marine Park looking for suspects.

In 2007, Rose wrote about the harassment to the Police Commissioner, Ray Kelly, warning that her husband's blood pressure problems could lead to a heart attack if the house was raided again. Commissioner Kelly ordered investigators to remove the Martins' address from their systems, but this turned out to be more difficult than expected. By that time, records had already been exchanged with many other police systems and copied into lots of different places. After the raid in 2010, Commissioner Kelly visited the Martins personally to apologise. When NBC TV picked up the story, even the New York City Mayor, Michael Bloomberg, publicly acknowledged the problem. Instead of trying to clean up test data further, police officials flagged the address with an alert, so that officers have to double-check any future visit with their superiors. It turns out that it was easier to change the police process than to fix a software test data problem.

The problem with test cases co-existing with real data gets even weirder when several systems need to talk to each other, because tests in one system are not recognised in another. This was the case of James Test, whose flight booking with American Airlines kept disappearing into a void. 'The booking would last only long enough to process my credit card, then fade to just a test', complained Mr Test to The Wall Street Journal. Jeff Sample ran into a similar problem caused by disagreements between the computer systems

of his travel agent, an airline in Argentina, and a bank. The airline processed his flight booking from Buenos Aires to Patagonia, and took the payment from his credit card, but another system then falsely flagged it as a test case and deleted the ticket. Even worse, the flight booking system no longer recognised the card charge, so Sample had problems getting a refund.

Sometimes, the only way to inspect a complex set of computer systems is to allow special test cases to exist alongside real data. But this approach can backfire badly if the tests end up matching any real-world usage. This problem is particularly problematic if test data can also be used for authentication, as the next story shows.

Appendix: References and bibliography

This appendix contains a list of all the reference material, news reports, articles and papers used in the research for this book. If you're reading this in an electronic version, just click the links to open online resources. If you're reading this on paper, go to humansvscomputers.com to find an online, clickable version of this appendix.

Licence to VOID

- [Why California Needs a Temporary License Plate Program](#), Metropolitan Transport Commission, 2014
- [What Not to Do After Your Driver's License Is Suspended](#), by Steve Harvey, LA Times, 8 September 2004
- [Man with "XXXXXXX" number plate receives parking fines for every unidentified car in city](#), by Matthew Moore, The Telegraph, 21 October 2009
- [Licensed to Bill](#), by David Mikkelson, Snopes, 30 October 1999
- [People and Events](#), by Steve Harvey, LA Times, 11 October 1988
- ['No' Doesn't Always Mean 'No' on a Personalized License Plate](#), by Steve Harvey, LA Times, 2 September 2004

Get out of jail free

- [Failed parole policy threatens lives, neighborhoods](#), by Katharine Russ, LAPD City Watch, 3 August 2010

- [Parolees rounded up for more supervision](#), by Jeff McDonald, The San Diego Union Tribune, 2 May 2010
- [Justices, 5-4, Tell California to Cut Prisoner Population](#), by Adam Liptak, The New York Times, 23 May 2011
- [Computer errors allow violent California prisoners to be released unsupervised](#), by Jack Dolan, Los Angeles Times, 26 May 2011
- [Second homicide tied to Washington inmates released by mistake](#), by Lewis Kamb and Joseph O'Sullivan, The Seattle Times, 31 December 2015
- [Prison Official in Washington State Resigns Over Early-Release Error](#), by Ashley Southall, The New York Times, 6 February 2016
- [US prisoners released early by software bug](#), BBC News, 23 December 2015
- [Why it took the state nearly 4 years to address prison-release error](#), by Tom James, Crosscut, 16 January 2016
- [Prisoner mistakenly released early charged with killing teen](#), CBS News/Associated Press, 31 December 2015
- [‘Pink-Panther-Räuber’ in der Schweiz gefasst](#), Burgenland-News, ORF, 10 December 2014
- [Prison error releases robber too early](#), The Local/Austrian Press Agency, 6 October 2014
- [Murder suspect mistakenly released from L.A. County jail is captured](#), by James Queally and Cindy Chang, The Los Angeles Times, 8 February 2016
- [‘On-the-run’ inmate in cell](#), The Sentinel, 18 August 2008
- [The human errors letting prisoners walk free](#), by Rohan Smith, News.com.au, 10 February 2016

-1 books

- [Jeffrey Bezos, Washington Post’s next owner, aims for a new](#)

- [‘golden era’ at the newspaper](#), By Paul Farhi, The Washington Post, 3 September 2013
- [Online Experimentation at Microsoft](#), Tonny Kohavi, Thomas Crook and others, Microsoft ThinkWeek paper, 2009
 - [One Click](#) by Richard L. Brandt, Portfolio, ISBN 9781591843757, 27 October 2011
 - [Birth of a Salesman](#), by Richard L. Brandt, The Wall Street Journal, 15 October 2011
 - [Amazon Hacks](#), by Paul Bausch, O’Reilly Media, ISBN 978-0596005429, 30 August 2003
 - [Entering negative value in “Add Subscriptions” changes value to all available subscriptions/entitlements](#), Red Hat Bugzilla – Bug 1372002, 31 August 2016
 - [Node reservation argument should not be negative or invalid value](#), Red Hat Bugzilla – Bug 1320433, 23 March 2016
 - [When a purchase order is created with a negative quantity...](#), IBM Support IZ59497, 27 August 2009
 - [Negative “On Order” Quantity](#), Intuit Accountants Community, 10 January 2008

Pepsi 349

- [Updated Keno Statement](#), Vernon A. Kirk, Delaware Lottery, 5 February 2016
- [Delaware lottery glitch leads to \\$2M lawsuit](#), by Jessica Masulli Reyes, The News Journal/USA Today, 28 November 2016
- [B.C. Lotto website glitch leads to \\$1M in retroactive winnings](#), CBC News, 9 July 2015
- [Va. Lottery Winners: Don’t Spend That Money Yet](#), By Michael Birnbaum, Washington Post, 21 October 2008
- [Virginia Lottery to award partial prizes for faulty game](#), The Lottery Post, 31 October 2008

- [Lottery glitch makes it harder to pick a winner](#), by Matthew Walberg, Chicago Tribune, 5 May 2012
- [Washington Lottery Computer Glitch Turns Winner Into Loser](#), by John McKay, News Talk 870 AM KFLD, 4 January 2013
- [Washington Lottery's Veterans Raffle falls far short of its goal](#), by Jordan Schrader, The Seattle Times/The Olympian, 3 January 2013
- [Oops, wrong numbers: Louisiana Lottery says TV show erred](#), Washington Times/Associated Press, 13 March 2017
- [Computer glitch voids green card lottery results](#), CNN, 14 May 2011
- [Green card lottery: US reviews 'diversity visa' glitch](#), BBC News, 6 June 2011
- [Bottle Cap Flap Riles the Masses](#), by Bob Drogen, Los Angeles Times, 26 July 1993
- [Holders of '349' Pepsi-Cola crowns lose bid in Supreme Court](#), by Joamar Canlas, The Manila Times, 25 August 2005
- [G.R. No. 146007](#), decision of the Philippines Supreme Court, in the case of Pepsi Cola Company vs Jaime Lacanilao
- [SC decides in finality on 'Pepsi 349' case](#), The Freeman, 26 June 2006

The haunted farm in the middle of America

- [How an internet mapping glitch turned a random Kansas farm into a digital hell](#), by Kashmir Hill, Fusion, 10 April 2016
- [Why lost phones are traced to Christina Lee and Michael Saba's Atlanta house](#), The Sydney Morning Herald, 8 February 2016
- [Kansas family sues mapping company for years of 'digital hell'](#), by Olivia Solon, The Guardian 9 August 2016

- [Montgomery school bus driver arrested on child-porn charges](#), by Robert Samuels, The Washington Post, 25 March 2011
- [US couple sues IP mapping firm over ‘digital hell’](#) by Kevin Rawlinson, BBC News, 11 August 2016
- [Kansas couple sues IP mapping firm for turning their life into a “digital hell”](#), Cyrus Farivar, Ars Technica, 10 August 2016

The older younger brother

- [Queensland Optus mobile phones change to daylight saving time](#), by Natalie Bochenski, The Sydney Morning Herald, 14 January 2015
- [Mobile phone glitch: Daylight saving error wakes Queensland Optus and Virgin customers an hour early](#), by Emilie Gramenz and Matt Eaton, ABC Radio Brisbane, 14 January 2015
- [Council chiefs left red-faced after TWO clocks are put forward instead of back by contractors](#), by Todd Fitzgerald, Manchester Evening News, 30 October 2016
- [Device exploded in bomber’s face after he ‘forgot about clocks changing’](#), The Telegraph, 2 April 2014
- [Meter fault gives free parking](#), by Chris Morris, Otago Daily Times, 1 May 2010
- [Apology after some Dunedin parking meters not adjusted for daylight savings](#), by Hamish McNeilly, Stuff NZ, 26 September 2016
- [Risks to the public in computers and related systems](#), by Peter G. Neumann, ACM SIGSOFT Software Engineering Notes, vol. 17, No. 3, July 1992, ISSN:0163-5948
- [Notices cancelled following glitch](#), New Zealand Police, 20 May 2015
- [Apple iPhone 4 alarm clock bug makes scores late for work](#), by Claudine Beaumont, The Telegraph, 1 November 2010

- [Israel does the time warp; daylight savings glitch wreaks havoc](#), by Niv Elis, Jerusalem Post, 8 September 2013
- [Second Twin Born as Daylight Saving Time Ends Winds Up Older Than His Brother](#), by Caitlin Nolan, Inside Edition, 11 November 2016

The Kennedy sisters fraud

- [Local Twins Denied a Learner's Permit Because The DMV Can't Tell Them Apart](#), by Margaret-Ann Carter, WJBF-TV News Channel 6, 22 October 2015
- [BBC fools HSBC voice recognition security system](#), by Dan Simmons, BBC News, 19 May 2017
- [Caught in a dragnet](#), by Meghan E. Irons, The Boston Globe, 17 July 2011
- [State scans Mass. license photos to find matches with suspects](#), By Matt Rocheleau, The Boston Globe, 20 December 2016
- [Assisting Pathologists in Detecting Cancer with Deep Learning](#), by Martin Stumpe and Lily Peng, Google Research Blog, 3 March 2017
- [Are Face-Detection Cameras Racist?](#), by Adam Rose, Time Magazine, 22 January 2010
- [Robot passport checker rejects Asian man's photo for having his eyes closed](#), James Titcomb, The Telegraph, 7 December 2016
- [Google Photos Tags Two African-Americans As Gorillas Through Facial Recognition Software](#), by Maggie Zhang, Forbes, 1 July 2015
- [An Other-Race Effect for Face Recognition Algorithms](#), by P J. Phillips, US National Institute of Standards and Technology, 19 August 2009

- [HP computers are racist](#), YouTube video t4DT3tQqgRM by wzamen01, 10 Dec 2009
- [HP looking into claim webcams can't see black people](#), by Mallory Simon, CNN, 24 December 2009
- [Face Recognition Performance: Role of Demographic Information](#), by Brendan F. Klare, IEEE Transactions on Information Forensics and Security, December 2012

Hubert Blaine Wolfe+585, Sr

- [A Third Survey of Domestic Electronic Digital Computing Systems: IBM 7070 Section.](#), Ballistic Research Laboratories (BRL). Report No. 1961
- [What's in a name, 666 Letters, plus 26 Given Names](#), by Norman Goldstein, The Free-Lance Star/ Associated Press, 25 June 1964
- [Hawaiian woman with 36-character last name wins ID card battle](#), The Guardian, 31 December 2013
- [Passenger and airport data interchange standards](#), version 13.1, ICAO, October 2013
- [Machine Readable Travel Documents](#), ICAO, Seventh Edition, 2015
- [Name acceptability](#) guidelines by the Australian Department of Foreign Affairs and Trade
- [Form I-94 Arrival/Departure Record](#) reference copy, U.S. Customs and Border Protection, 24 April 2014
- [Government Data Standards Catalogue Volume 2 – Data Types Standards](#), issue 0.5, UK Cabinet Office
- [What's in a name? John and Margaret Nelson obviously feel...](#), United Press International, 23 January 1986
- [Are there any restrictions on names and titles?](#), UK Deed Poll office

- [The name's Bond ... times 21](#), The Scotsman, 17 November 2006
- [Why, O Why, Doesn't That Name Compute?](#), New York Times, 28 August 1991
- [Emma's 14 Bond names](#), The Sun, 28th October 2012.

GoVeg.com

- [What's in a name? Ask GoVeg.com](#), by Nara Schoenberg, Chicago Tribune, 18 July 2003
- [Man changes his name to Tyrannosaurus Rex because it's 'cooler' than his own](#), by Richard Hartley-Parkinson, Mail Online, 9 May 2012
- [Woman Gets New Name On eBay](#), by Tatiana Morales, CBS/Associated Press, 30 March 2005
- [Baby named Metallica rocks Sweden](#), BBC News, 4 April 2007
- [Couple tries to name child '@'](#), CNN/Reuters, 16 August 2007
- [Is it a bird? Is it a plane? No, it's a baby...](#), Reuters, 8 August 2013
- ['Number 16 Bus Shelter', 'Violence' among kids registered names](#), NZ Herald, 24 July 2008
- [US father names son 'Version 2.0'](#), BBC News, 2 February 2004

They

- [Missouri man legally changes his name to 'They'](#), USA Today/Associated Press, 23 September 2004
- [In Search of Achmad Sukarno](#), by Steven Drakeley, University of Western Sydney, Asia Reconstructed: Proceedings of the 16th Biennial Conference of the ASAA, 2006 (ISBN 9780958083737)

- [U Thant](#), United Nations Secretary-General web site
- [Flight Booking - Passenger has single name only in Passport](#), Trip Advisor, 2 May 2015
- [How Do You Do, FNU? Some in U.S. Handle Just One Name](#), by Miriam Jordan, The Wall Street Journal, 21 March 2016

The four-letter N-word

- [How to pass “Null” \(a real surname!\) to a SOAP web service in ActionScript 3?](#), Stack Overflow, 16 December 2010
- [A few years ago I ordered a custom license plate ‘NULL’](#), Hacker News, 26 March 2016
- [Null References: The Billion Dollar Mistake](#), by Tony Hoare, InfoQ, 25 August 2009
- [Hello, I’m Mr. Null. My Name Makes Me Invisible to Computers](#), by Christopher Null, Wired Magazine, 5 November 2015
- [These unlucky people have names that break computers](#), By Chris Baraniuk, BBC Future, 25 March 2016
- [Cleverest con of all time? Man claims he gets free holidays and car rentals after changing his surname to ‘Null’](#), by Caroline McGuire, Daily Mail Online, 29 March 2016

Facebook Jamal Ibrahim

- [Australian with ‘misleading’ Facebook name thanks supporters](#), BBC News, 23 November 2015
- [Vietnamese name man admits hoax in Facebook battle](#), BBC News, 25 November 2015
- [A Gay Girl in Damascus becomes a heroine of the Syrian revolt](#), by Katherine Marsh, The Guardian, 6 May 2011

- [Will gays be ‘sacrificial lambs’ in Arab Spring?](#), by Catriona Davies, CNN, 13 June 2011
- [After Report of Disappearance, Questions About Syrian-American Blogger](#), by Robert Mackey and Liam Stack, The Lede/The New York Times, 7 June 2011
- [Gay girl in Damascus’ Syrian blogger allegedly kidnapped](#), by Elizabeth Flock, The Washington Post, 7 June 2011
- [‘A Gay Girl in Damascus’ comes clean](#), by Melissa Bell and Elizabeth Flock, The Washington Post, 12 June 2011
- [Batman bin Suparman jailed in Singapore](#), BBC Trending, 12 November 2013
- [‘Buzz Lightyear’ fined £200 for speeding - in a CORSA](#), Sunday Express, 11 November 2016
- [Baby named Metallica rocks Sweden](#), BBC News, 4 April 2007
- [To Celebrate January 25 Revolution, Egyptian Man Names Daughter ‘Facebook’](#), by William Lee Adams, Time magazine, 21 February 2011
- [The name’s 7, iPhone 7: Ukrainian man changes name to win gadget](#), RT/Associated Press, 29 October 2016
- [NY man legally changes name to ‘Star Wars’ villain](#), Associated Press, 21 December 2015
- [Hello Mr Cheeseburger: name-changing hits record high](#), by Zachary Spiro, The Times, February 22 2016
- [Meet the people who’ve given themselves crazy names by deed poll](#), by Julie McCaffrey, Mirror 1 November 2011
- [Man Legally Changes Name to ‘Above Znoneofthe’ to Appear Last on Ballot](#), Katie Reilly, Time Magazine, 30 January 2016
- [Teenager changes name to Captain Fantastic](#), by Chris Irvine, The Telegraph, 3 November 2008

TDCU 1ZZ

- [Bill paves way for introduction of new ‘Eircode’ postcodes](#) by Michael O’Regan, The Irish Times, 11 June 2015
- [Your man with glasses letter reaches Buncrana man Barry Henderson](#), BBC News, 18 July 2015
- [Beverly Hillsin postinumero 90 210 katoaa Oulusta](#), by Kari Sankala, Kaleva, 7 October 2009
- [First postcode for remote UK isle](#), BBC News, 7 August 2005

Leap year HICAPS

- [Excel incorrectly assumes that the year 1900 is a leap year](#), Microsoft Support Article ID 214326, 17 Dec 17, 2015
- [Exchange Server 2007 and leap year day Feb 29 2008...](#), Microsoft Exchange Team Blog, 29 February 2008
- [Yes, Microsoft Azure Was Downed By Leap-Year Bug](#), By Dan Goodin, Ars Technica/Wired, 1 March 2012
- [Summary of Windows Azure Service Disruption on Feb 29th, 2012](#), Bill Laing, Microsoft Azure Blog, 9 March 2012
- [Airport hiccup leaves 100s of passengers pantless](#), The Local, 1 March 2016
- [Leap year glitch fixed on Sony Playstation 3](#), by Kristin Kalning, NBC News, 2 March 2010
- [Microsoft Says Zune players working again](#), NBC News, 2 January 2009
- [Schalttag-Problem legt Koffersoftware lahm](#), Der Spiegel, 29 February 2016
- [Hundreds of passengers arrive at their destinations without their luggage after airport sorting device REFUSES to work because it didn’t recognise the leap year](#), by Georgia Diebelius, Daily Mail, 2 March 2016

- [Leap year blamed for HICAPS stumble](#) by Chris Zappone, The Sydney Morning Herald, 29 February 2012
- [TomTom sat-nav devices hit by GPS ‘leap year bug’](#), BBC News, 3 April 2012
- [Montreal radio system also stymied by ‘leap second’ glitch that hit Ottawa](#), by Jon Willing, Ottawa Sun, 5 January 2017
- [‘Leap Second’ Bug Wreaks Havoc Across Web](#), by Cade Metz, Wired, 7 January 2012
- [No, the Linux leap second bug WON’T crash the web](#), by Gavin Clarke, The Register, 9 January 2015
- [Leap second hits Qantas air bookings, while Reddit and Mozilla stutter](#), by Charles Arthur, 2 July 2012
- [Excel incorrectly assumes that the year 1900 is a leap year](#), Microsoft Knowledge Base article 214326, 17 December 2015

610,000 JPY

- [UBS Warburg Stands to Lose Reputation Along With Millions After Dentsu Fiasco](#), by Jason Singer and Yumiko Ono, The Wall Street Journal, 3 December 2001
- [Tokyo market chief quits over ‘fat finger’ trade](#), by Mariko Sanchanta, Financial Times, 20 December 2005
- [‘Fat finger’ trade costs Tokyo shares boss his job](#), by David McNeill, The Independent, 2 April 2009
- [UBS Japan mistakenly places \\$31 bln bond trade](#), by Mariko Katsumura, Reuters, 25 February 2009
- [\\$617 Billion in Japan Stock Orders Scrapped After Error](#), by Anna Kitanaka and Toshiro Hasegawa, Bloomberg, 1 October 2014

Keep Calm and Go Bankrupt

- [‘Keep Calm And Rape’ T-Shirt Maker Shutters After Harsh Backlash](#), by Catherine Taibi, Huffington Post, 25th June 2013
- [Remixed Messages](#), by Rob Walker, 1 July 2009
- [Original collection of ‘Keep Calm And Carry On’ posters could be worth £15,000](#), The Telegraph, 23 February 2012
- [Keep Calm and Carry On: Are the parodies still funny?](#), Tom Heyden, BBC News Magazine, 6 March 2013
- [Aussie ‘Keep Calm’ T-shirts glorify rape, murder](#), by Asher Moses, The Sydney Morning Herald, 6 March 2013
- [‘Keep Calm And Rape’ T-Shirt Maker Shutters After Harsh Backlash](#), Catherine Taibi, The Huffington Post, 25 June 2013
- [The Bad Things that happen when algorithms run online shops](#), Chris Baraniuk, BBC Future, 20 August 2015
- [Man behind ‘Carry On’ T-shirts says company is ‘dead’](#), Jose Pagliery, CNN, 5 March 2013
- [Microsoft is deleting its AI chatbot’s incredibly racist tweets](#) by Rob Price, Business Insider, 24 March 2016
- [Learning from Tay’s introduction](#), Peter Lee, Official Microsoft Blog, 25 March 2016
- [IBM’s Watson gives proper diagnosis for Japanese leukemia patient after doctors were stumped for months](#) , Alfred Ng, New York Daily News, 7 August 2016
- [IBM’s Watson Memorized the Entire ‘Urban Dictionary,’ Then His Overlords Had to Delete It](#), Alexis C. Madrigal, The Atlantic, 10 Jan 2013
- [Prank leaves Justin Bieber facing tour of North Korea](#), Daniel Emery, BBC News, 5 July 2010

The Making of a Fly

- [Do retailers have to honour pricing mistakes?](#) By Nicole

- Blackmore, The Telegraph, 29 Jan 2014
- [‘I spot and exploit pricing errors for a living’](#), by Ruth Caven, The Telegraph, 12 Dec 2014
 - [IBM customers buy \\$1 laptops in site snafu](#), CNET, 19 January 2000
 - [Ashford.com flaw allows ‘free’ purchases](#), Jeff Peline, CNet, 2 January 2012
 - [Screwfix.com price glitch reduces all items to £34.99](#), by Nicole Blackmore, The Telegraph, 24 January 2014
 - [How A Book About Flies Came To Be Priced \\$24 Million On Amazon](#), Olivia Solon, Wired, 27 April 2011
 - [Algorithms Gone Wild: 3 Cases of Computers We Trusted Too Much](#), Muneeza Iqbal, AOL, 13 March 2013
 - [Bill Gates on giving away his fortune - and Mark Zuckerberg’s engagement?](#) by Jemima Kiss, The Guardian, 13 June 2011
 - [Amazon’s \\$23 million book - algorithms gone wild](#), Andy Smith, ZDNet, 27 April 2011
 - [Amazon sellers hit by nightmare before Christmas as glitch cuts prices to 1p](#), Rupert Neate, The Guardian, 14 December 2014
 - [IBM customers buy \\$1 laptops in site snafu](#), Jeff Bakalar, CNet, 19 January 2000
 - [Derry firm Repricer Express sorry for Amazon 1p glitch](#), BBC News, 15 December 2014
 - [Error hands out \\$5 fares on United](#), by John Schmeltzer, Chicago Tribune, 15 May 2002
 - [United Airlines to honour tickets issued for \\$0 in glitch](#), BBC News, 14 September 2013
 - [Apple given until this afternoon to address pricing error](#), The China Post News, 27 July 2010
 - [Apple to deliver cut-price computers to Taiwan after error](#), AFP, 28 July 2010

- [Website pricing mistake costs Zappos.com \\$1.6 million](#), The Las Vegas Sun, 23 May 2010
- [Pricing error costs Zappos \\$1.6 Million](#), by Josh Smith, AOL.com, 24 May 2010

Panic aggregator

- [What caused the pound's flash crash?](#), by Rob Davies, The Guardian, 7 October 2016
- [Citi trader deepened October's pound 'flash crash'](#), by Katie Martin and Caroline Binham, Financial Times, 7 December 2016
- [Flash Crash of the Pound Baffles Traders With Algorithms Being Blamed](#), by Netty Idayu Ismail, Bloomberg 7 October 2016
- [Testimony Concerning the Severe Market Disruption on May 6, 2010](#), by Mary L. Schapiro, U.S. Securities and Exchange Commission, 11 May 2010
- [How a stray mouse click choked the NYSE & cost a bank \\$150K](#), by John Stokes, Ars Technica, 28 January 2010
- [Google mistakes high NHS web traffic for cyber attack](#), Alice Udale-Smith, Sky News, 01 February 2017
- [NHS reply-all meltdown swamped system with half a billion emails](#), by Gareth Corfield, The Register, 31 January 2017
- [History's biggest 'fat-finger' trading errors](#), by Ebony Bowden, The New Daily, 2 October 2014
- [Navinder Singh Sarao part 1: reclusive trader or criminal mastermind?](#), by: Philip Stafford, Lindsay Fortado and Jane Croft, 17 August 2015
- [D2MX Pty Ltd pays \\$120,000 infringement notice penalty](#), 15-376MR, Australian Securities and Investment Commission, 10 December 2015.

- [D2MX Pty Ltd pays 110000 dollar infringement notice penalty, 14-095MR](#), Australian Securities and Investment Commission, 6 May 2014

The MiDAS Touch

- [Inside Michigan's faulty unemployment system that hit thousands with fraud](#), by Ryan Felton, The Guardian, 12 February 2016
- [Thousands of unemployment cases reviewed; 8% affirmed as fraud](#), by Darren Cunningham, FOX17 News, 21 September 2015
- [Criminalizing the unemployed](#), by Ryan Felton, Detroit Metro Times, 1 July 2015
- [Suit settled over false fraud claims against Michigan's jobless](#), by Paul Egan, Detroit Free Press, 2 February 2017
- [Suit filed against state fraud detection vendor](#), by Paul Egan, Detroit Free Press, 2 March 2017
- [Claimants in jobless insurance nightmare pledge: 'Never again.'](#), Paul Egan, Detroit Free Press, 29 January 2017

Robo-debt

- [Centrelink's automated debt raising and recovery system](#), Report by the Acting Commonwealth Ombudsman, Richard Glenn, under the Ombudsman Act 1976
- [Call to suspend Centrelink system after single mother receives \\$24,000 debt notice](#), by Christopher Knaus and Gareth Hutchens, The Guardian, 27 December 2016
- [Centrelink criticised for claiming war widow owed \\$18,000 after administrative error](#), by Paul Farrell and Christopher Knaus, The Guardian, 20 April 2017

- [Centrelink officer says only a fraction of debts in welfare crackdown are genuine](#), by Christopher Knaus, The Guardian, 23 December 2016
- [Centrelink inquiry told ‘income averaging’ creating incorrect welfare debts](#), by Christopher Knaus, The Guardian, 5 April 2017
- [Centrelink debt notices based on ‘idiotic’ faith in big data, IT expert says](#), Christopher Knaus, 29 December 2016
- [Debts As Little As \\$20 Were Referred To External Collectors By Centrelink](#), by Alice Workman, BuzzFeed News, 22 May 2017
- [Centrelink to expand its robo-debt program](#), Sky News, 17 May 2017
- [Centrelink targeting \\$980m from data matching expansion](#), by Allie Coyne, IT News/Next Media, 19 May 2017
- [Fears Centrelink online glitch may send welfare recipients to debt collectors](#), by Christopher Knaus, 19 December 2016, The Guardian
- [Net to Snag Deadbeats Also Snares Innocent](#), by Megan Garvey, Los Angeles Times, 12 April 1998

The Grand Rapids Massacre

- [Christmas and New Year as risk factors for death.](#), by David Phillips, Social Science and Medicine, 7 October 2010
- [A deadly computer glitch](#), Battle Creek Enquirer, 9 January 2003
- [The Odd Truth](#), by Brian Bernbaum, CBS News, 9 January 2003
- [Hospital Revives Its “Dead” Patients](#), by Larry Barrett, Baseline Magazine, 10 February 2003
- [System failure behind latest blue cross woes](#), by Joel Brown, ABC11 WTVD Eyewitness News, 14 January 2016

- [Blue Cross customers fume as insurer scrambles to fix ACA enrollment errors](#) , by John Murawski, The Charlotte Observer, 15 January 2016
- [Inmates mistakenly released due to software glitch](#), by KXAN-TV/Associated Press, 19 June 2014
- [“Jailhouse rocked:” 25 suspects freed due to computer glitch](#), by CBS News, 20 June 2014
- [Inmates Freed By DPD Computer Glitch Suspects In New Crime](#) by Andrea Lucia, CBS DFW, 19 June 2014

Police e-mail

- [Computer glitch leaves California’s neediest Medicare recipients without benefits in 18 counties](#), Legal Aid Society of San Mateo County, 26 February 2007
- [Medicare clients sue state over computer flub](#), by Beth Winegarner on February 27, 2007
- [Lawsuit: Glitch dropped seniors from Medicare](#), by Michael Manekin, East Bay Times, 27 February 2007
- [Computer glitch affects 45K welfare & food stamp recipients](#), by Melanie Payne, News-Press, 5 November 2016
- [Food stamp glitch put 27K in peril](#), by Melanie Payne, News-Press, 13 March 2014
- [Coding error behind missing child protection reports in Qld](#), by Paris Cowan, ITNews Australia, 20 October 2015
- [Qld Education uncovers 270 extra lost child abuse reports](#), by Paris Cowan, ITNews Australia, 25 August 2015
- [OneSchool – Investigation into the 2015 failure of the OneSchool Student Protection Module](#), Queensland Department of Education and Training, 16 October 2015
- [Glitch causes Florida Abuse Hotline failure to pass on alerts to law enforcement](#), by Valerie Boey, FOX 35 Orlando, 4 May 2017

Girls, alcohol, cocaine and whatever

- [Glitch hits Visa users with more than \\$23 quadrillion charge](#), by Jason Kessler, CNN, 15 July 2009
- [Uber says Philly woman's \\$28,600 authorization hold was a computer glitch](#) by Ben Hooper, UPI, 21 December 2016
- [Uber customer in Philly gets surprise charge of \\$28,000](#), by Jason Laughlin, The Philadelphia Inquirer, 20 December 2016
- [PayPal accidentally credits man \\$92 quadrillion](#), by Sho Wills, CNN, July 17, 2013
- [Bank glitch makes businessman a billionaire – for five hours](#), by Keith W. Kohn, Orlando Sentinel, 27 March 2010
- [If You Were Billionaire for Five Hours](#), by Robert Frank, The Wall Street Journal, 29 Mar 2010
- [First Chicago's Big Goof Has Customers A Bit Unbalanced](#), by John Schmeltzer, 18 May 1996
- [\\$2 million Goulburn fraudster Luke Brett Moore found guilty](#), The Sydney Morning Herald, 25 February 2015
- [The bank lent me \\$2m so I spent it on strippers and cars](#), BBC Magazine, 14 December 2016
- [Bank error millionaire walks free](#), by Bernard Lagan, The Times, 3 December 2016
- [Woman accidentally given \\$4.6M by bank, spends most of it on 'luxury' items](#), by Emanuela Campanella, Global News Canada, 5 May 2016
- [Christine Lee allegedly moved \\$5000 a day into secret accounts to take advantage of a Westpac glitch](#), News.com.au, 7 May 2016
- [Christine Jia Xin Lee's explanation for \\$4.6 million Westpac overdraft](#), by Rachel Olding, The Sydney Morning Herald, 22 May 2016
- [Australian court bails student who 'spent bank error millions'](#), BBC News, 5 May 2016

The Northumbrian coffee party

- [Issue Alert - Upcoming CPS Reprocessing of Records with Questionable Income Earned from Work Values](#), Federal Student Aid Office announcement, 18 July 2014
- [Even the feds screw up FAFSA: Online glitch affects thousands](#), by Claudia Rowe, Seattle Times Education Lab, 22 July 2014
- [Stray Decimal Points Put Thousands of Students' Financial Aid in Jeopardy](#), by David Ludwig, The Atlantic, 23 July 2014
- [Bankrupt cancer survivor gets shock: \\$300 loan balloons into \\$40,000 debt in 2 years](#), by Aimee Green, The Oregonian, 3 May 2016
- [Misplaced decimal point: Woman owed \\$400, not \\$40,000, company says](#), by Aimee Green, The Oregonian, 6 May 2016
- [Mum charged £34,000 for hiring a car for three days in firm's IT glitch slams Santander for the error](#), Mirror.co.uk, 13 April 2016
- [O2 phone bill 'left couple penniless after decimal point blunder saw their account drained of cash'](#), by James Connell and Dave Rudge, The Mirror, 13 February 2016
- [Dropped decimal plays havoc with hotel charges](#), by Russ Bynum, Associated Press/The Gadsden Times, 2 November 2002
- [Glitch Drops Decimal From Holiday Inn Bills](#), Los Angeles Times, 2 November 2002
- [9000 Amsterdammers krijgen miljoenen door fout](#), Echt Amsterdams Nieuws, 13 December 2013
- [Amsterdam council calls for return of benefits after paying 100 times too much](#), by Peter Cluskey, The Irish Times, 15 January 2014
- [Miss Universe pageant snafu is deja vu](#), by Mike Stoben, Toronto Sun, 21 December 2015

- [Wrong ‘Miss Universe Canada’ Crowned in Pageant](#), by Erica Ho, Time, 30 May 2013
- [Northumbria University ‘life-threatening’ caffeine test fine](#), BBC News, 25 January 2017

Rounding up the parliament

- [Fremont Cafe Charging Too Much Sales Tax](#), by Chris Chmura, Christine Roher and Joe Rojas, NBC Bay Area, 16 March 2017
- [Beware lessons of history when dealing with quirky indices](#), by James Mackintosh, Financial Times, 24 August 2015
- [New twist in water billing mess: class action lawsuit](#), by Alexa Talamo, Shreveport Times/USA Today, 3 April 2017
- [Ofcom to examine BT over-charging claims](#), by Miles Briggall, The Guardian, 28 June 2013
- [Millions overcharged because of ‘weak’ gas](#), by Jessica Winch, The Telegraph, 24 June 2013
- [SEC Charges AXA Rosenberg Entities for Concealing Error in Quantitative Investment Model](#), Securities and Exchange Commission Press Release 2011-37, 3 February 2011
- [Risks to the public in computers and related systems](#), by Peter G. Neumann, ACM SIGSOFT Software Engineering Notes, vol. 17, No. 3, July 1992, ISSN:0163-5948

Unicode of Death

- [Prank crashes iPhones with rainbow emoji messages](#), Samuel Gibbs, The Guardian, 18 January 2017
- [Receiving this rainbow emoji will crash your iPhone](#), by Liam Tung, ZDNet, 19 January 2017
- [A Simple Message Can Crash Skype So Badly You Need to Reinstall It](#), by Jamie Condliffe, Gizmodo, 3 June 2015

- [These 8 characters crash Skype, and once they're in your chat history, the app can't start](#) , by Emil Protalinski, 2 June 2015
- [iOS bug lets anyone crash your iPhone with a text message](#), by Samuel Gibbs, The Guardian, 27 May 2015
- [Rendering bug crashes OS X, iOS apps with string of Arabic characters](#) , by Andrew Cunningham and Dan Goodin, 29 August 2013
- [Anatomy of a killer bug: How just 5 characters can murder iPhone, Mac apps](#), by Chris Williams, The Register, 4 September 2013

That '70s iPhone

- [Changing your iPhone date to 1 Jan 1970 will not make it retro - it just breaks](#), by Madhumita Murgia and James Titcomb, The Telegraph, 17 February 2016
- [iPhone owners receive ghost emails from January 1, 1970](#), by James Titcomb, The Telegraph, 7 March 2016
- [December 31, 1969](#), Paypal Community Forum
- [This Is Why Facebook Thinks You Have 46-Year Friendships](#), Eliana Dockterman, Time Magazine, 01 January 2016
- [New Threat Can Auto-Brick Apple Devices](#), Brian Krebs, Krebs On Security, 12 April 2016

February 2038

- [Woman, 105, invited to preschool](#), United Press International, 15 November 2012
- [Ryan: Debt on Track to Hit 800 Percent of GDP; 'CBO Can't Conceive of Any Way' Economy Can Continue Past 2037](#), by Nicholas Ballasy, CNS News, 6 April 2011

Have you turned your Dreamliner off and on again?

- [Lost Radio Contact Leaves Pilots On Their Own](#), by Linda Geppert, IEEE Spectrum, 1 November 2004
- [Sunk by Windows NT](#), Wired, 24 July 1998
- [Shock: East Lancs couple receive £500m electricity bill](#), by Katie Mercer, Lancashire Telegraph, 23 July 2014
- [Airworthiness Directives; The Boeing Company Airplanes](#), Federal Aviation Administration, document number 2015-10066, 1 May 2015
- [US aviation authority: Boeing 787 bug could cause ‘loss of control’](#), by Samuel Gibbs, The Guardian, 1 May 2015
- [To keep a Boeing Dreamliner flying, reboot once every 248 days](#), by Edgar Alvarez, Endgaget, 5 January 2015
- [Software Problem Led to System Failure at Dhahran, Saudi Arabia](#), Report to the Chairman, Subcommittee on Investigations and Oversight, Committee on Science, Space, and Technology, House of Representatives, Patriot missile defense, by the United States General Accounting Office, February 1992

Free Money Saturday

- [Computer Glitch Leads To Brawl At Wauwatosa Kmart](#), WISN Channel 12 Milwaukee, 27 November 2007
- [Administrative Proceeding File No. 3-15570 In the Matter of Knight Capital Americas LLC](#), U.S. Securities and Exchange Commission, 16 October 2013
- [Everything You Need to Know About the Knight Capital Meltdown](#), by Matt Koppenheffer, The Motley Fool, 14 September 2012
- [Joyce Leaving Knight After Steering Firm From Meltdown to Merger](#), by Sam Mamudi, Bloomberg, 3 July 2013

Mr Test

- [Administrative Proceeding File No. 3-15570](#), US Securities and Exchange Commission, 16 October 2013
- [TSA: Computer glitch led to Atlanta airport scare](#), CNN, 21 April 2006
- [Administrative Proceeding File No. 3-17338](#), US Securities and Exchange Commission, 12 July 2016
- [SEC: Citigroup Provided Incomplete Blue Sheet Data for 15 Years](#), press release 2016-138, US Securities and Exchange Commission, 12 July 2016
- [The Role of Software in Recent Catastrophic Accidents](#), W. Eric Wong, Vidroha Debroy, and Andrew Restrepo, Department of Computer Science University of Texas at Dallas, 2009
- [When Does a Test End?](#), by James Bach, 5 January 2011
- [Top Cop Offers “Mea Culpa” to Elderly Couple for 50 Raids](#), by Jennifer Millman, NBC Channel 4 New York, 19 March 2010
- [Computer glitch prompts 50 raids on elderly couple’s home](#), by Dan Goodin, The Register, 19 March 2010
- [It’s Really Hard to Fill in a Web Form When Your Name Is Mr. Sample](#), by Patrick McGroarty, The Wall Street Journal, 14 February 2017

Five blanks hit the target

- [That “zombie apocalypse” warning in Montana? It was fake](#), by Laura Zuckerman, Reuters, 12 February 2013
- [Police say Mont. TV zombie hoax likely linked to others](#), by Michael Beall, USA Today, 13 February 2013
- [‘Dead bodies are rising from their graves’: Hackers use emergency alert system to warn of zombie apocalypse](#), National Post/Associated Press, 11 February 2013

- [Man's car warns of air raid over London](#), by Lester Haines, The Register, 25 May 2012
- [Digital Alert Systems DASDEC and Monroe Electronics R189 One-Net firmware exposes private root SSH key](#), CERT, 26 Jun 2013
- [Radio stations that ignored major vulnerability start playing anti-Trump song](#), by Sam Machkovech, Ars Technica, 2 February 2017
- [DDoS attack that disrupted internet was largest of its kind in history, experts say](#), by Nicky Woolf, The Guardian, 26 October 2016
- [These 60 dumb passwords can hijack over 500,000 IoT devices into the Mirai botnet](#), by Graham Cluley, 10 October 2016
- [Hard-coded password exposes up to 46,000 video surveillance DVRs to hacking](#), By Lucian Constantin, CSO/IDG News, 17 February 2016
- [Lenovo blunder means '12345678' used as password for default file sharing app](#), by Jason Murdock, V3, 27 January 2016
- [5-year-old boy hacks dad's Xbox account](#), Doug Gross, CNN, 4 April 2014
- [Security Researcher Acknowledgments for Microsoft Online Services](#), Microsoft, March 2014

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