Feb. 3rd

Luna 9 Lands

Feb. 3, 1966;

21:45:30 Moscow Time

The Soviet Union's Luna 9 became the first spacecraft to make a soft landing on the Moon.

The lander had a spherical body with a diameter of 58 centimeters, weighed 99 kg, and used a landing bag to survive the impact speed of 22 km/hour. It bounced several times before coming to rest in the Ocean of Storms.

The fact that it didn't just sink into a thick layer of lunar dust surprised many people, and it operated successfully for three days before its batteries ran down. The spacecraft's design team was led by Sergei Korolev, the father of the Soviet Space Program.

A mockup of the Lunar 9 satellite. Photo by Pline. CC BY-SA 3.0.

Approximately five minutes after touchdown, it began transmitting data back to Earth, and a few hours later began sending images of the Moon's surface. The pictures weren't released by the Soviets, but scientists at the UK's Jodrell Bank observatory noticed that the signal format was identical to the Radiofax system used by newspapers for transmitting images. The *Daily Express* newspaper rushed a suitable receiver to the observatory, and Luna 9's pictures were decoded and published worldwide.

Luna 9 was one of 24 probes in the programme. The earlier Luna 2 was the first to 'land' on the Moon on Sept. 13, 1959, when it crashed just east of Mare Imbrium.

Pixar Founded

Feb. 3, 1986

Steve Jobs [Oct 5] paid Lucasfilm [Sept 12] $10 million for its Graphics Group, which he renamed Pixar Animation Studios. The group had been formed in 1979, and was headed by Edwin Catmull [March 31] and Alvy Ray Smith.

On Aug. 17, Pixar released "Luxo Jr." by John Lasseter, the first 3D computer-animated film to be nominated for the animated short film Oscar. The title character, a small desk lamp, soon became part of the company's logo.

Initially, Pixar positioned itself as a high-end computer hardware company with its Pixar Image Computer, a system primarily aimed at government agencies and the medical community. The device sold for $135,000, and required an add-on $35,000 workstation. Strangely, it was never a best-seller, and threatened to put the company out of business. In April 1990, Jobs sold Pixar's hardware division to Vicom Systems.

On the software side, Pixar released RenderMan in 1989 for manipulating 3D images, and it became the first software to win an Oscar in 2001. Pixar also worked closely with Disney on their CAPS project, developing ways to automate the long-winded inking and painting steps in 2D animation.

By 1991, Pixar was down to just 42 employees when it signed a $26 million deal with Disney to produce three 3D computer-animated features, the first of which was "Toy Story" [Nov 22].

Even as late as 1994, Jobs was thinking of selling the company, and it was only after Disney agreed to distribute "Toy Story" during the 1995 holiday season that he decided to give the business another chance. Just as well: the enormous success of the movie changed Pixar into an animation powerhouse.

Disney purchased Pixar in 2006 for $7.4 billion, which resulted in Jobs becoming Disney's largest single shareholder.

Open Source Software

Feb. 3, 1998

The phrase "Open Source Software" (OSS) was coined by Christine Peterson, the executive director of the Foresight Institute, a nonprofit think tank concerned with nanotechnology and AI.

He recalled the moment like so: "While not ideal, it struck me as good enough. I ran it by at least four others: Eric Drexler, Mark Miller, and Todd Anderson liked it, while a friend in marketing and public relations felt the term 'open' had been overused and abused and believed we could do better."

Later that week, on Feb. 5, a group was assembled to brainstorm strategy. The Brains Trust featured Eric Raymond [Dec 4], Anderson, Peterson, Larry Augustin, Sam Ockman, and Jon "maddog" Hall [Aug 7] present via speakerphone. The question of terminology was brought up, and "open source software" was adopted.

Many people mark OSS's first public appearance as the 'Open Source Summit' held on April 7, 1998 in Palo Alto, which promoted Netscape's release of its browser's source code [Feb 23].

IPv4 Runs Dry

Feb. 3, 2011

Internet Protocol version 4's (IPv4 [Sept 1]) utilization of 32-bit numbers provides approximately 4.3 billion unique addresses, which seemed eminently reasonable back in the 1970's. But concerns about the supply running out starting appearing in the early 1990's, and grew more strident as the Web [Dec 25] impacted usage.

IPv6 [Dec 00] employs 128-bit numbers, and so offers around 8×10^{28} times more addresses than IPv4, which is probably adequate even when factoring in the Internet of Things [Sept 21].

IP address allocation is managed by the Internet Assigned Numbers Authority (IANA [Aug 6]) and five Regional Internet Registries (RIRs), and on this day, the IPv4 address pool was officially exhausted when the last five blocks were passed to the RIRs. On April 15, APNIC (the Asia Pacific Network Information Centre) became the first RIR to exhaust its supply. The other RIRs followed, with AFRINIC (Africa) being the last in April 2017.

However, the obvious fact that the Internet is still functioning isn't because IPv6 rode in to save the day. Indeed, at the start of 2021, IPv6 still only accounted for around 32% of all addresses.

A much more important and insidious factor is how the Internet is being structured. Originally it was a network of peers, with everyone possessing a unique address. Increasingly, it's turned into a much smaller network of mega commercial servers, with a multitude of clients (i.e. the rest of us) who have to share temporary addresses. This has had the nasty effect of turning most people into purely Internet consumers rather than producers of content.

Wikipedia Flowers

Feb. 3, 2021

Sysadmins at the Wikimedia data server in Singapore [June 20] noticed that a single image of the innocuous Michaelmas daisy had been accounting for 20% of its traffic for the last six months, averaging 90 million hits per day from various ISPs in India.

The New York aster (a Michaelmas daisy). Photo by TeunSpaans. CC BY-SA 3.0

Further investigation showed that before June 8, 2020, the flower had only been requested a few hundred times per day. That had started changing on June 9, and a huge upsurge coincided with India banning TikTok and several other Chinese apps on June 29.

By the end of Feb. 2021, the flow of requests had dropped significantly after a social media app in India had been updated.