**System Successes**
When GPS World debuted in January 1990, 15 satellites had been launched, including the 10 prototypes of Block I satellites, and four of them had ceased operation. By the end 1995, 18 more had risen; with some decommissionings, this brought the total number of GPS satellites set healthy to 25.

**Industry Advances**
### System Successes

<table>
<thead>
<tr>
<th>Year</th>
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<td>2001</td>
<td>SA TURNED OFF: President Bill Clinton orders selective availability (SA) turned off on May 1. The U.S. Department of Defense (DOD) wins funds for GPS modernization.</td>
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<td>VULNERABLE: The DOT releases a report assessing the vulnerability of the transportation infrastructure relying on GPS.</td>
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### Industry Advances

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<td>GPS III RFP: The GPS Wing releases an RFP for development and production of the Block IIIA satellites, the first of three GPS III increments.</td>
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### GNSS Timeline

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GNSS TIMELINE

System Successes

GPS III AWARD
The U.S. Air Force awards a $114 billion development and production contract for the first eight GPS III satellites (Block IIR) to a team headed by Lockheed Martin. Team members include ITT Corp. and General Dynamics.

BLOCK IIR-M
The final Block IIR-M satellite is launched and begins to broadcast a demonstration of the L5 signal.

LIGHTSquared
U.S. government tests show that 79% of GPS receivers examined were interfered with at a distance of 100 meters from a LightSquared base station.

LOCATA DEMO
The U.S. Air Force signs a contract with Locata to install a ground-based LocataLite positioning system at White Sands Missile Range, New Mexico; fielding Locata’s technology for reference-truth positioning when GPS is being completely jammed.

SPACEX ARRIVES
The U.S. Air Force signs a cooperative research and development agreement with SpaceX. The FAA releases a new roadmap for the integration of civil unmanned aerial systems (UAS) in the National Airspace System.

CIVIL SIGNALS
The U.S. Air Force Space Command begins broadcasting civil navigation (CNAV) messages on all operational GPS satellites capable of transmitting the L2C and L5 signals. L5 is designed to meet commercial needs; L5 meets safety-of-life transportation requirements.

DRONES TAKE OFF
The FAA issues regulations authorizing six unmanned aerial systems (UAS) test sites, one in each of six states, to operate without requiring authorization for each type of aircraft flown.

OCX RECEIVERS
Harris Corp. delivers the first of 34 modernized receivers to support the GPS Next-Generation Operational Control System (OCX). They receive 13 military and civilian signals.

INDUSTRY ALLIES
The GPS Innovation and Development Alliance is launched, replacing both the U.S. GPS Industry Council and the Coalition to Save Our GPS. (IOC) is declared.

IMAGES FROM SPACE

CORRECTIONS
Hemisphere GNSS releases its Atlas GNSS global correction service, along with its AtlasLink smart antenna.

POKEMON GO
Pokémon GO fever sweeps the land. The augmented-reality Android game uses GPS to bring the imaginary Pokémon creatures into the real world.

Wearables are big at CES.

2010 January

“I started GPS World back in 1989. With a $1,200 investment and business plan in hand, I struggled through 43 investor presentations until finally receiving an approval nod for funds to launch the magazine. What I remember most during those times was invariably a potential investor would say, ‘Now explain this to me again — what is GPS and why does it need a magazine?’”

— Stephen Colwell, GPS World publisher

Industry Advances

GPS + GLO/IASS
GNSS capabilities of the International GNSS Service (IGS) tracking network are greatly enhanced, giving rise to a truly global GNSS tracking system with more than 100 GPS + GLO/IASS receivers.

SIRF + CSR + QUALCOMM
SIRF merges with CSR, which is acquired by Qualcomm in 2015. Nimbura introduces its AP Series of embedded GNSS/Inertial OEM boards plus an inertial measurement unit from Applanix.

IT ANY OTHER NAME
Magellan changes its name to Ashtech. Septentrio releases the multi-GNSS receiver Astrelle 3.

COALITION FORMS
The Coalition to Save Our GPS is formed by industry representatives in response to the FCC’s conditional waiver for LightSquared.

TERRA BOLLA
Rockwell Collins delivers its 450,000th Defense Advanced GPS Receiver (DAGR) to U.S. and allied warfighters.

GOOGLE REVEALS A SELF-DRIVING AUTO PROTOTYPE
Google reveals a self-driving auto prototype without a steering wheel.

2008 - 2016

2008
2009
2010
2011
2012
2013
2014
2015
2016

PHOTO CREDITS: (Top left to bottom right) USAF, NPEF, IGS, Septentrio, Trimble, U.S. Air Force, NPEF, IGS, SiRF, Septentrio, Trimble.
System Successes

**NEXT-GEN OCX**
The U.S. Air Force accepts delivery of the OCX Launch and Checkout System (LCS) (Block 0) baseline from Raytheon. LCS is a fully modernized cyber-secure ground system.

**VESPUCCI ALOFT**
The first GPS III satellite ("Vespucci") is launched aboard a SpaceX rocket. The U.S. Air Force awards Lockheed Martin a $7.2 billion contract to build 22 more GPS III satellites.

**GPS III PRODUCTION**
Lockheed Martin’s GPS III production facility keeps new satellites rolling off the production line. GPS III SV02 and SV03 are launched.

**LIGADO DECISION**
The FCC approved an order to allow Ligado Networks to deploy a low-power nationwide 5G network, despite objections from the DOD, DOT and major U.S. airlines concerned about GPS interference.

China completes BeiDou-3 launches.

**2017**

**2018**

**2019**

**2020**

Industry Advances

**ENTER LIGADO**
LightSquared re-emerges as Ligado Networks.

Garmin agrees to acquire Delorme.

Google announces it will provide raw GNSS measurements via Android phones.

Iridium introduces its Satellite Time and Location (STL) service.

**DUAL FREQUENCY**
Mobile brand Xiaomi launches the first dual-frequency GNSS smartphone, which is outfitted with a Broadcom BCM47755 chip.

**STORY MAPS**
Esri introduces a new Story Maps beta. The Story Maps team was founded in 2010 to enable place-based multimedia storytelling.

**COVID-19 HITS**
A pandemic of the coronavirus COVID-19 disrupts the industry. Many employees begin to work from home, while those at facilities wear personal protective equipment. New GNSS products continue to be introduced.