

The Evolution of GPS: Exploring the MIT Press Essential Knowledge

THE EVOLUTION OF GPS TECHNOLOGY

OVER THE YEARS, GPS TECHNOLOGY HAS GROWN AND EVOLVED FROM AN IDEA TO A NECESSARY PART OF SOCIETY. SO WE'VE OUTLINED THE EVOLUTION OF GPS TECHNOLOGY TO DEMONSTRATE JUST HOW FAR IT'S COME.

GLOBAL POSITIONING SYSTEM, OR "GPS", IS A SPACE-BASED SATELLITE NAVIGATION SYSTEM THAT PROVIDES LOCATION AND TIME INFORMATION IN ALL WEATHER CONDITIONS, ANYWHERE ON OR NEAR THE EARTH WHERE THERE IS AN UNOBSTRUCTED LINE OF SIGHT TO FOUR OR MORE GPS SATELLITES.

CREATION

GPS WAS INVENTED BY IVAN GETTING AND THE U.S. DEPT OF DEFENSE IN THE 1960'S FOR MILITARY USE DURING THE COLD WAR FROM TECHNOLOGY HE HELPED DEVELOP WHILE WORKING FOR THE RAYTHEON COMPANY.

WORLD USE

AFTER A 250 PASSENGER KOREAN PLANE FLEW INTO SOVIET AIRSPACE AND WAS SHOT DOWN IN 1983, PRESIDENT REAGAN DECLARED THAT WHEN GPS BECAME FUNCTIONAL THAT IT WOULD BE AVAILABLE FOR WORLD USE.

CIVILIAN USE

PRESIDENT CLINTON MADE GPS TECHNOLOGY A MILITARY TECHNOLOGICAL SYSTEM IN 1996. THIS GAVE CIVILIANS THE ABILITY TO USE THE GPS TECHNOLOGY, WHICH UNLEASHED A HUGE DEMAND FOR IT.

PERSONAL USE

IN 2004, PRESIDENT BUSH DECLARED THAT THERE WOULD BE NO USER FEES ASSOCIATED WITH GPS, WHICH LEAD TO PERSONAL GPS DEVICES, AND A NEW SATELLITE FREQUENCY WAS DEVELOPED FOR CIVILIAN USE.

CELL PHONE USE


THE FCC REQUIRED CELLULAR COMPANIES TO TRACK THEIR CUSTOMERS FOR EMERGENCY PURPOSES IN 1998. SPRINT LEAD THE TECHNOLOGY IN '04 WITH THEIR TOWER TRIANGULATION SYSTEM FOR "FAMILY LOCATION SERVICES."

OTHER COUNTRIES



OTHER GOVERNMENTS HAVE NOW LAUNCHED (OR WILL BE) LAUNCHING THEIR OWN GPS SATELLITE SYSTEMS, SUCH AS GALILEO, GLONASS, AND BEIDOU.

TIMELINE

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|----------------------|--|--------------------------------------|--------------------------------|---------------------------------|-----------------------------|------------------------------------|------------------------------------|------------------------|--------------------------------------|--|
| '60 | '63 | '83 | '89 | '95 | '96 | '99 | '04 | '05 | NOW | |
| U.S. GPS DEVELOPMENT | KOREAN FLIGHT SHOT DOWN IN SOVIET AIRSPACE | SATELLITES DECLARED FULLY FUNCTIONAL | FCC REQUIRES LOCATION TRACKING | MODERN U.S. SATELLITES LAUNCHED | GPS IS A PART OF DAILY LIFE | EXPERIMENTAL U.S. SATELLITE LAUNCH | COMPLETE U.S. GPS SATELLITE LAUNCH | CIVILIAN USE PERMITTED | PERSONAL USE PERMITTED, NO USER FEES | SPRINT CREATES TOWER TRIANGULATION GPS |



BROUGHT TO YOU BY TRUVU: THE PERSONAL TRACKING APP THAT MERGES LOCATION, COMMUNICATION, AND PEOPLE. NOW AVAILABLE IN THE ITUNES APP STORE AND GOOGLE PLAY.

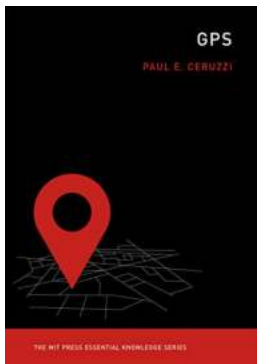



GPS, short for Global Positioning System, has become an integral part of our daily lives. From navigating unfamiliar roads to tracking our fitness activities, GPS has revolutionized the way we interact with technology. In this article, we delve into the MIT Press Essential Knowledge book titled "GPS" to gain a

comprehensive understanding of the history, functionality, and impact of this remarkable technology.

The Birth of GPS

GPS didn't emerge overnight; rather, it is the result of years of scientific research and technological advancements. The book "GPS" provides a detailed account of how this remarkable navigation system came into existence. Starting from its origins in military applications during the Cold War era, the authors shed light on the major milestones in GPS development.



GPS (The MIT Press Essential Knowledge series)

by Paul E. Ceruzzi (Kindle Edition)

★★★★☆ 4 out of 5

| | |
|----------------------|-------------|
| Language | : English |
| File size | : 1199 KB |
| Text-to-Speech | : Enabled |
| Screen Reader | : Supported |
| Enhanced typesetting | : Enabled |
| Print length | : 172 pages |



The book covers the inception of early satellite-based positioning systems, the collaboration between different government agencies, and the obstacles faced in establishing a global navigation system. It showcases the dedication, brilliance, and perseverance of the individuals involved in creating this groundbreaking technology.

Understanding GPS Functionality

To fully comprehend the impact of GPS, it is essential to understand how it works. The authors of "GPS" guide readers through the technical intricacies of the

system, including the satellites in orbit, the ground-based control stations, and the various receiver devices that enable us to access GPS services.

The book provides in-depth explanations of the signal transmission, the trilateration method to determine positions, and the numerous applications that rely on GPS data. Whether it's navigation, location-based services, or even time synchronization, GPS plays a crucial role in enabling these functionalities.

Applications and Implications

GPS has revolutionized numerous industries, ranging from transportation and logistics to agriculture and environmental monitoring. The authors explore the wide range of applications of GPS across different sectors, highlighting its impact on efficiency, safety, and resource management.

Moreover, "GPS" delves into the legal and ethical implications of this technology. The book discusses issues such as privacy concerns, national security, and the potential misuse of GPS for malicious purposes.

The Future of GPS

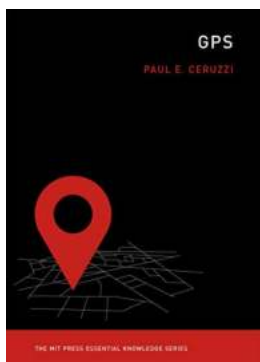
As GPS technology continues to evolve, the authors speculate on its future advancements and potential disruptions. From the integration of GPS with other technologies like augmented reality and artificial intelligence to the deployment of next-generation satellite systems, the book offers fascinating insights into the future of navigation and positioning.

Furthermore, "GPS" emphasizes the importance of staying informed and adapting to the changes brought about by GPS technology. It encourages readers to embrace the opportunities offered by GPS while also remaining mindful of the associated challenges and implications.

The MIT Press Essential Knowledge book on GPS provides a compelling and comprehensive exploration of this indispensable technology. From its historical origins and technical workings to its wide-ranging applications and future possibilities, the book offers an engaging narrative that captivates both experts and newcomers to the world of GPS.

Whether you are a technology enthusiast, a professional in related industries, or simply curious about the extraordinary journey of GPS, "GPS" will undoubtedly exceed your expectations. It is an indispensable guidebook that sheds light on the ubiquitous GPS technology that has transformed the way we navigate and interact with the world.

So, dive into the fascinating world of GPS by getting your hands on "GPS" from The MIT Press Essential Knowledge series. Discover the evolution of this remarkable technology and gain a comprehensive understanding of its impact on our modern society.



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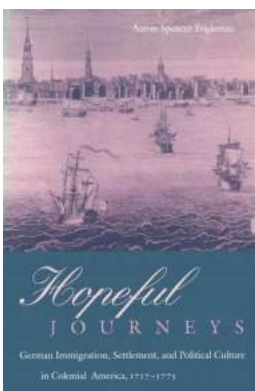
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A concise history of GPS, from its military origins to its commercial applications and ubiquity in everyday life.

GPS is ubiquitous in everyday life. GPS mapping is standard equipment in many new cars and geolocation services are embedded in smart phones. GPS makes Uber and Lyft possible; driverless cars won't be able to drive without it. In this volume in the MIT Press Essential Knowledge series, Paul Ceruzzi offers a concise history of GPS, explaining how a once-obscure space technology became an invisible piece of our infrastructure, as essential to modern life as electric power or clean water.

GPS relays precise time and positioning information from orbiting satellites to receivers on the ground, at sea, and in the air. It operates worldwide, and its basic signals are free, although private companies can commodify the data provided. Ceruzzi recounts the origins of GPS and its predecessor technologies, including early aircraft navigation systems and satellites. He describes the invention of GPS as a space technology in the post-Apollo, pre-Space Shuttle years and its first military and commercial uses. Ceruzzi explains how the convergence of three major technological developments—the microprocessor, the Internet, and cellular telephony—enabled the development and application of GPS technology. Recognizing the importance of satellite positioning systems in a shifting geopolitical landscape—and perhaps doubting U.S. assurances of perpetual GPS availability—other countries are now building or have already developed their own systems, and Ceruzzi reports on these efforts in the European Union, Russia, India, China, and Japan.



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Germany has been a country known for its rich history and diverse culture. In the early 18th century, waves of German immigrants made their way to colonial America in...

The individual not even Freud himself has had greater impact on modern psychotherapy. —Psychology Today



albertellis, Ph.D.
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Kristene A. Doyle, Ph.D.

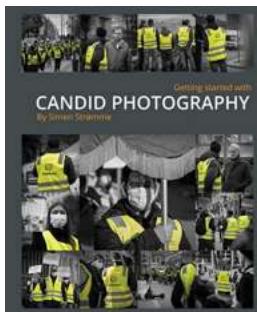
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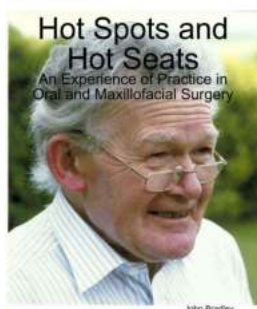
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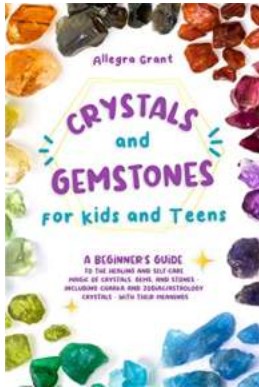
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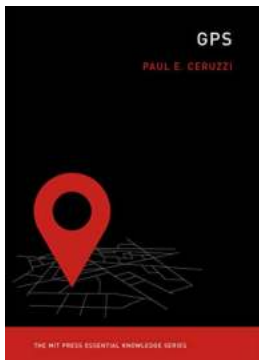
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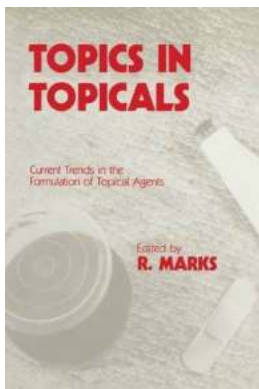
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