The Boeing 777 Study Guide, 2018 Edition. This 777 Study Guide provides an in-depth overview of the Boeing 777 aircraft. It covers the aircraft's design, development, and production history, as well as its operational characteristics.

The Boeing 777 originated in the late 1980s during market research by the Seattle-based Boeing Company. To determine what the market would bear, Boeing solicited input from commercial airlines, asking them what they wanted in a new aircraft. Once Boeing determined the type of aircraft to build, the company set out to design an aircraft that would be a step forward in all areas.

In terms of size, the Boeing 777 is the world’s largest twin-engine, wide-body, long-range commercial jetliner. It can carry 300-400 passengers over 8,000 miles, making it ideal for long-haul international flights. The 777 has a range of 7,000-13,000 miles, depending on the configuration.

The Boeing 777 is powered by two engines, each capable of generating 70,000 pounds of thrust. It features advanced aerodynamics, including a blended winglet design, which reduces drag and improves fuel efficiency. The aircraft also uses composite materials, making it lighter and more fuel-efficient than traditional metal structures.

The Boeing 777 was designed with the latest in avionics and communication technology. It is equipped with advanced inflight entertainment systems, allowing passengers to choose from a wide range of movies, music, and games during their flight. The aircraft also utilizes state-of-the-art flight management systems, which optimize flight performance and reduce fuel consumption.

The Boeing 777 is a testament to Boeing’s commitment to innovation and excellence in aviation. It represents the culmination of decades of research and development, and continues to set new standards for efficiency, comfort, and safety. With its large capacity and long range, the Boeing 777 is poised to continue its dominance in the global airline industry for many years to come.
Example exercises from the author's industrial experience dealing with a typical aircraft design are included. This book is a compilation of peer-reviewed papers from the 2018 Asia-Pacific International Symposium on Aerospace Technology (APISAT 2018). The symposium is a common endeavour between the four national aerospace societies in China, Australia, Korea, and Japan, namely, the Chinese Society of Aeronautics and Astronautics (CSAA), Royal Aeronautical Society Australian Division (RAeS Australian Division), the Korean Society for Aeronautical and Space Sciences (KSAS) and the Japan Society for Aeronautical and Space Sciences (JSASS). APISAT is an annual event initiated in 2008 to provide an opportunity for researchers and engineers from Asia-Pacific countries to discuss current and future advanced topics in aeronautical and space engineering. The current conditions of the Air Transport industry, as well as expectations for the future, are presented in sections covering the historical and present status of air transportation, regulation and administration of air transportation, air carrier aircraft (Boeing, McDonnell Douglas, Lockheed Martin, Airbus, National Aeronautics and General Aviation). The final section of the General Aviation Revitalization Act (1994) is presented in a new chapter. The included disk contains a DOS-based summary of the chapters. Annotation copyright by Book News, Inc., Portland, OR.Vintagelibrary explores the most influential videogames of all time, including Super Mario Bros., Grand Theft Auto III, Doom, The Sims and many more. Drawing on interviews as well as the authors' own lifelong experience with videogames, the book discusses each game's development, predecessors, critical reception, and influence on the industry. It also features hundreds of full-color screenshots and images, including rare photos of game boxes and other materials. Vintage Games is the ideal book for game enthusiasts and professionals who desire a broader understanding of the history of videogames and their evolution from a niche to a global market. Annotation "Flight Vehicle Performance and Aerodynamic Control is designed to serve as a text for either an 11-weeks or a 16-week course at the sophomore level. It explains the typical methods used to estimate aircraft performance, the theoretical basis of these methods, and how various parameters derived from the aircraft geometry can be used to estimate the requirements of control surfaces and the aerodynamic forces required to actuate these surfaces. This book includes time-tested computer programs that perform the analyses in a manner that reduces student effort and improves result accuracy. Because the source code is given, users can write a FORTRAN compiler to modify the program to suit particular needs. The major advantage of the software is that more realistic problems may be treated and the effects of parametric programs are more accurate than calculators. The programs are available as executables for Windows machines as well as in ASCII source code versions that can be readily compiled and then executed on any Unix, Linux, and Macintosh machines and on mainframes. Presented in a handy question-and-answer format, this practical guide to airline trafficdraws on the expertise of a commercial airline pilot to provide valuable information on safety, security, screening, passenger health, aerodynamics, and many other topics, accompanied by a glossary of common buzzwords for travelers. Original. On 28 November 2008, a Boeing 777-200ER, operated by British Airways as flight BA38, on its way from Beijing, China to London (Heathrow), suffered on approach to Heathrow Airport an in-flight engine rollback. At 720 feet agl, the right engine ceased responding to autothrottle commands for increased power and instead the power reduced to 1.03 Engine Pressure Ratio (EPR). Seven seconds later the left engine power reduced to 1.02 EPR. This reduction led to a loss of airspeed and the aircraft touching down some 30 m short of the paved surface of Runway 2L at London Heathrow. The investigation identified that the reduction in thrust was due to restricted airflow to both engines. It was determined that the restriction occurred most probably in the Fuel Oil Heat Exchangers. The investigation identified the forming of ice in the fuel system as probable cause. The aircraft was destroyed, but there were no casualties. Documents the production of the passenger aircraft, examining Boeing's team management strategy, the design creation done exclusively on computer, and the unique financing plan.Time-Triggered Communication helps readers build an understanding of the conceptual foundations, operation, and application of time-triggered communication, which is widely used for embedded systems in a diverse range of industries. This book assembles contributions from experts that examine the differences and commonalities of the most significant protocols including TTP, FlexRay, TTEthernet, SAFEbus, TTCAN, and LIN. Covering the spectrum, from low-cost time-triggered fieldbus networks to ultra-reliable time-triggered networks used for safety-critical applications, the author illustrates the inherent benefits of time-triggered communication in terms of predictability, complexity management, fault-tolerance, and analytical dependability modeling, which are key aspects of safety-critical systems. Examples covered include FlexRay in cars, TTP in railway and avionic systems, and TTEthernet in aerospace applications. Illustrating key concepts based on real-world industrial applications, this book: Details the underlying concepts and principles of time-triggered communication. Explores the properties of a time-triggered communication system, contrasting its strengths and weaknesses. Focuses on the core algorithms applied in many systems, including those used for clock synchronization, startup, membership, and fault isolation. Describes the protocols that incorporate presented algorithms. Covers tooling requirements and solutions for system integration, including scheduling. The information in this book is extremely useful to industry leaders who design and manufacture products with distributed embedded systems based on time-triggered communication. It also benefits suppliers of embedded components or development tools used in this area. As an educational tool, this material can be used to teach students and working professionals in areas including embedded systems, computer networks, system architectures, dependability, real-time systems, and automotive, avionics, and industrial control systems. Achieving Systems Safety contains papers presented at the twentieth annual Safety-critical Systems Symposium, held in Bristol, UK, in February 2012. The Symposium is for engineers, managers and academics in the field of safety systems, across all industry sectors, so the papers make up this volume offer a wide-ranging coverage of current safety topics, and a blend of academic research and industrial experience. They include both recent developments in the field and discussion of open issues that will shape future progress. The topics covered by the 20 papers in this volume include vulnerabilities in global navigation satellite systems, safety culture and community, transport safety, cyber-attacks on safety-critical systems, improving our approach to systems safety, accidents, assessment, validation and testing, safety standards and safety levels. The book will be of interest to both academics and practitioners working in the safety-critical systems arena. Featuring contributions from major technology vendors, industry consortia, and government and private research establishments, the Industrial Communication Technology Handbook, Second Edition provides an overview of the ever-expanding array of communication network and technology used in today's industries, including automotive applications, avionics, building automation, energy and power systems, train applications, and more. New to the Second Edition: 46 brand-new chapters and 21 substantially revised chapters include the latest, most significant developments in specialized communication technologies and systems. Addition of new application-specific requirements for communication services and their supporting technologies. It is useful to a broad spectrum of professionals involved in the conception, design, development, standardization, and use of specialized communication networks as well as academic institutions engaged in engineering education and vocational training states of the art in aeronautical engineering has been significantly accelerated by the development of advanced analysis and design tools. Used in the early design stages for aircraft and spacecraft, these methods have provided a fundamental understanding of physical phenomena and enabled designers to predict and analyze critical characteristics of new vehicles, including the capability to control or modify unsatisfactory behavior. For example, the relatively recent emergence and routine use of extremely powerful, full digital computer hardware and software has had a major impact on design capabilities and procedures. Sophisticated new airflow measurement and visualization systems permit the analyst to conduct micro- and macro-studies of properties within flow fields on and off the surfaces of models in advanced wind tunnels. Trade studies of the most efficient geometrical shapes for aircraft can be conducted with blazing speed within a broad scope of integrated technical disciplines, and the use of sophisticated piloted simulators in the vehicle development process permits the most important segment of operations—the human pilot—to make early assessments of the acceptability of the vehicle for its intended mission. Knowledgeable applications of these tools of the trade dramatically reduce risk and redesign, and increase the marketability and safety of new aerospace vehicles. This book gathers together a critical body of knowledge on what enterprise architecture (EA) is and how it can be used to better organize the functions of systems across an enterprise for an effective business IT alignment. The chapters provide a solid foundation for a cross-disciplinary professional practice. This book is an introduction to the design of modern civil and military jet engines using engine design projects.