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Nota di contenuto	Digital Information –The “Genetic Code” of Modern Technology -- Digitization – Areas of Application and Research Objectives -- Virtual Reality in Media and Technology- Digitization of cultural artifacts and industrial production processes -- Video Data Processing - The best images on every channel -- Audio Codecs - Listening pleasure from the digital world -- Digital Radio - Worldwide premier radio quality -- 5G Data Transfer at Maximum Speed - More data, more speed, more security -- Industrial Data Space - Reference architecture for the digitization of industry -- EMOIO Research Project - An interface with the world of computers -- Fraunhofer Additive Manufacturing Alliance - From data straight to highly complex products -- Future Work Lab - The workplace of the future -- Cyber-Physical Systems- Research for

the digital factory -- “Go Beyond 4.0” Lighthouse Project - Individualized mass production -- Cognitive Systems and Robotics- Intelligent data utilization for autonomous systems -- Fraunhofer Big Data Alliance - Mining valuable data -- Safety and Security - Cybersecurity as the basis for successful digitization -- Fault-Tolerant Systems- Resilience as a security concept in the era of digitization -- Blockchain - Reliable Transactions -- E-Health - Digital Transformation and its Potential for Healthcare -- Smart Energy - The digital transformation in the energy sector -- Advanced Software Engineering- Developing and testing model-based software securely and efficiently -- Automated Driving - Computers take the wheel.

Sommario/riassunto

With the exception of written letters and personal conversations, digital technology forms the basis of nearly every means of communication and information that we use today. It is also used to control the essential elements of economic, scientific, and public and private life: security, production, mobility, media, and healthcare. Without exaggerating it is possible to say that digital technology has become one of the foundations of our technologically oriented civilization. The benefits of modern data technology are so impressive and the potential for future applications so enormous that we cannot fail to promote its development if we are to retain our leading role in the competitive international marketplace. In this process, security plays a vital role in each of the areas of application of digital technology — the more technological sectors are entrusted to data systems technology, the more important their reliability becomes to us. Developing digital systems further while simultaneously ensuring that they always act and respond in the best interests of people is a central goal of the technological research and development propagated and conducted by Fraunhofer. The Editor Prof. Dr.-Ing. Reimund Neugebauer is the tenth president of the Fraunhofer Gesellschaft. He took office on October 1, 2012 and is responsible for the board area of management policy and research.
